# Intrapreneurship and the management of Research Centre growth in University Art and Design departments

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# Abstract

This thesis is an investigation of factors that influence the leadership and management of Research Centres during the early phases of growth. A small number of studies have specifically identified factors such as training, career development and business management but there is a dearth of empirical work to explain the causality of factors during origination, formation and development.

Five Research Centres based in UK University Art and Design departments operating at the upper end of the research assessment spectrum have been investigated in depth. A speculative and transferable framework was employed drawing upon research management, Higher Education management, entrepreneurship and small business development literature to assess the interaction of potential factors. Documentary evidence and autobiographical interviews with founding members acted as a catalyst for the dissemination of stories in a rich narrative form. Semi-structured interviews conducted with Deans, Heads of Department, Research Directors and researchers have shed light upon the influence of factors in play.

Comparison has been made between cases and across areas of research activity. The analysis revealed patterns of factors with common contexts, conditions and consequences over an eight to ten year period. The completeness of the data enabled the framework to be improved and empirically verified. 39 factors are proposed within 8 theoretical concepts to explain Research Centre growth – ‘intrapreneurship’, ‘credentialisation’, ‘opportunism’, ‘formalisation’, ‘gamesmanship’, ‘critical mass’, ‘knowledge capitalisation’ and ‘network connectivity’.

The framework serves a useful purpose for research staff and senior management to formulate effective strategies for Research Centre growth. The findings suggest that research leaders have to demonstrate many intrapreneurial qualities for Research Centres to succeed – strong leadership and strategic awareness; the negotiation and procurement of resources; and an aptitude for micro-political skills. Equally, senior management need to recognise the complex interaction of factors with critical events, happenings and incidents that confront Research Centres over time in order to effectively capitalise on research investment.

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# Chapter 1: Context and purpose of the inquiry

## 1.1 Aims and objectives

This study is an investigation into the complex range of factors that surround the growth of Research Centres in Art and Design departments in UK Higher Education. In particular, the inquiry has focused upon the interaction of phenomena and cause and effect relationships[1] affecting the origination, formation and development of Art and Design Research Centres alongside management structures, policies, procedures and processes that have evolved over time.

The author is therefore interested in how and why Research Centres in the field of Art and Design form and evolve to become dedicated centres for quality research output[2]. In order to achieve this aim the study has several objectives, namely: to identify factors that contribute to the set-up and development of Research Centres operating within Higher Educational institutions (HEIs); to identify institutional factors which contribute to their success; and to propose a generic model of Art and Design Research Centre development. The objectives are therefore broad, and build upon a previous study undertaken by the author (Roworth-Stokes, 1996) which focused on a single case study to analyse management success factors of a Research Centre[3]. As with the former study, the Higher Education context and rationale remains essentially the same, and some of the salient points are brought forward below in order that the specific purpose of the inquiry can be fully understood.

[1] The purpose is to understand how an event, happening or other phenomena might impact on another in a linear and sequential pattern. As with Miles and Huberman (1994, p.227) *'such a chain helps analysts lay out explicitly what may be causing certain phenomena. Although the chain does represent a simplification, that very simplification carries with it the seeds of a fuller explanation'*. This approach builds upon many other studies which utilise causal connection techniques to establish the sensemaking of 'critical events' identified by respondents and actions arising from them (see for example, Jenkins and Johnson, 1997; Eden *et al*., 1992; Perren, 1999).

[2] As defined through their contributions to the HEFCE RAE under Unit of assessment 64 (Art and Design).

[3] Roworth-Stokes (1996) undertook a single case study to: a) established a methodological framework to investigate success factors of managing a Research Centre in UK Higher Education, and b) identify possible factors that might have resonance in a larger cross-case study. The factors identified included: senior management commitment to establishing a research capability; strong leadership with strategic vision, the ability to listen and empower staff; autonomy for leadership; professional endorsement (both internal and external such as RAE and Professorships); highly trained researchers with flexible terms and conditions; managed and co-ordinated networks; a sense of shared-responsibility for the research groups development.

### 1.2 Research evaluation in Higher Education

The recently announced White Paper on the future of Higher Education (DfES, 2003) has acknowledged years of under-investment in the sector and financial pressure on HEIs has been the primary concern for the last decade[4]. It is therefore probably not surprising that income from research grants and contracts with industry have grown more rapidly that overall HEI income – £1.5 billion in 1995/96 to almost £2 billion in 1999/2000[5]. As Roe (1995) suggests:

> *'Higher Education Institutions are obliged to take the issue of external income very seriously. Research Centres supply much of that income and should be able to exploit this position'.*
> Roe (1995, p.1)

Yet, the financial pressure on research activity has been exacerbated by the Research Assessment Exercise (RAE) which has also become a key performance indicator for HEIs and provides a second stream of core funding other than teaching: £829 million was committed by Higher Education Funding Council for England (HEFCE) through the RAE in 1998/99. These arrangements can be traced back to 1991 when the government published its white paper: 'Higher Education: A New Framework' (HMSO, 1991), which ended the so-called 'binary divide' and sought to create a new level playing field for the sector[6].

Whilst the former Polytechnics made arrangements to take on equal status in name at least with the existing Universities, this also meant the establishment of new funding bodies – the Higher Education Funding Councils for England, Scotland, Wales and the Department of Education Northern Ireland (DENI). These bodies unified the evaluation systems for Higher Education research which had been largely the domain of the old Universities – through the 1992 RAE. The former Polytechnics who had previously attracted minimal monies from the Research Councils[7] were encouraged to access £585 million (McKenna 1996) distributed across the 72 Units of Assessment (UOA). As a result, the 'new' Universities approximately

[4] Higher Education as a whole went into deficit by £19 million in 1994/5 and 'Big reductions in capital funding coupled with efficiency savings and a continued clamp down on growth, left higher education facing real term reductions of more than £300 million (7%) in 1995/6 and more than £550 million (12%) in 1998/99' (Tysome, 1995).
[5] This is equivalent to 14.48% of total income in 1995/96 and 15.44% of total income in 1999/2000 (HEFCE, 2001a).
[6] Former polytechnics became universities due to the end of the binary divide following the 1991 Government White Paper and were eligible for research funding from 1992 in the RAE.
[7] PCFC (1990) reported that only 4% of total monies went to polytechnics and colleges and recommended that £35 million be allocated selectively in 1991/92.

trebled the amount of research funding available to them at a time when Higher Education as a whole was about to go into deficit by £19 million in 1994/5[8].

The 1992 RAE brought about a system with a five point scale rating from 1 to 5, with 1 being the lowest score showing little or no research expertise and 5 representing outstanding centres of international research excellence. This process of evaluation was carried out through submissions of research activity detailing both the number of staff submitting and evidence of their research work. Funding was allocated according to the rating of the research taking place and to the number of research active staff who submitted in total from the institution within the Unit of Assessment being judged.

This method of calculating research funds has led to a difficult dilemma for HEI research co-ordinators: a balance having to be struck between the range and quality of the research material being produced by staff – with a corresponding impact on the profile of the department in the research rating; and the number of staff to be submitted due to the 'multiplier' effect on the funding secured. Research Directors had to be particularly adept at trying to predetermine the RAE panels judgment of the research submission against the institutional policies of trying to encourage research activity by staff. This was further complicated in the 1996 RAE with the creation of an extended rating scale – 1, 2, 3a, 3b, 4, 5 and 5*.

[8] HEFCE Analysis of 1995 Strategic Plans and Financial Forecasts.

### 1.3 The effect of the 1992 Research Assessment Exercise

These developments mark a significant period in the development of Art and Design research – up until the 1992 RAE the subject had been ineligible for research funding under its own categorisation[9]. For Art and Design this was indeed the first time that the *'invention of ideas, images, performances, and artefacts including design where these lead to new or substantially improved insights'* had, in a formal sense, constituted research. This development did not go unnoticed, and the ability for Art and Design departments – many of which were located in the former Polytechnics due to their vocational emphasis – to structure themselves toward research proved rather a shock to many of the leading research Universities (Albury, 1995).

The vast majority of Art and Design colleges that had previously seen themselves as being teaching led before the 1992 RAE began to re-address their strategies in light of the increased emphasis on research. Frayling (1993) pointed out that *'Everyone's gearing up for research in an incredible way'* ( p.5). For many Art and Design departments, often seen as expensive due to their specialist nature, this offered an opportunity to diversify funding to more flexible forms of revenue generation. However, the total funding available for Art and Design was only £2.5 million and calls for more finances to stimulate Art and Design research soon emerged:

> *'advances in art and design research would be significantly delayed as a result of HEFCE's research funding decisions'*
> (Brickwood, 1993, p.3)

HEFCE admitted that some subject areas had indeed been affected by the dilution in funds as the new University sector absorbed the former Polytechnics, and an increase of 280% in Art and Design research funding was put forward for the 1996 RAE.

Yet, almost as soon as the Art and Design sector began to realise the significance of the RAE, debates began about the nature of Art and Design research. A lot of the most contentious arguments that have surrounded this area concern the 'act' of designing, and as practice in itself, it could constitute research. Cross (1993) wrote acidically:

[9] The Universities Funding Circular 5/92 identified Art and Design research which: 'includes scholarship, the intervention and generation of ideas, images, performances, and artefacts, including design where these lead to new or substantially improved insights: and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction'

> *'We know from design research both that designers are normally unsystematic in their work and that the knowledge contained in artefacts is barely understood because it is rarely made explicit...Acts of designing, in themselves, simply do not provide this understanding. Neither, for that matter, should works of art be considered as works of research...Artists and designers can, and therefore do: but it is the job of academics to teach and to research.'*
> (Cross, 1993, p.13)

Sir Christopher Frayling (1994) wrote a highly influential paper entitled 'Research in Art and Design' which identified three categories of research, looking back to the work of the art critic Herbert Read.

The first was 'Research into Art and Design,' examples of which included design and art history and the psychology of Art and Design – basically desk research. Secondly, 'Research through Art and Design', characterised by experimental inquiry that might take the form of material research (Frayling gives the example of titanium splattering or colorisation of metal studies) where a research methodology is established utilising Art and Design techniques to establish new knowledge by either deductive or inductive approaches.

Lastly, 'Research for Art and Design' proved the most controversial category, which Frayling explained could include keeping a diary to reveal step-by-step the performance of a practical experiment in a studio combined with a report, to put the work into context. Frayling deemed this to be 'action research' but this description bears little resemblance to the intepretation of 'action research' in the social sciences[10] where it more closely aligns with his definition of 'Research through Art and Design'. However, it is this last category's ability to recognise the mere process of creating an artefact through the approach of being a 'reflective practitioner' which has angered some commentators, leading to suggestions by critics such as Goggin (1994, p.13) that: *'designers have been unable to support their innovative concepts with well-reasoned argument about the decisions they made, and why they made them!'*

[10] Zuker-Skerritt (1989) in his work on 'action research' for the 'reflective practitioner' in education described the process as being work based in the sense that the researcher was involved directly in the research environment and that the process was one of examining closely the existing situation to control the context for the research and then to make a change. The results of this change within the research environment could be reflected upon and then possibly lead to revised or amended further 'action research' projects.

### 1.4 Debates surrounding Art and Design research

Many leading figures in Art and Design have felt that funding appears to encourage more formal, intellectual and scientific studies at the expense of those that have obvious practical application. Frayling (1993) sought to highlight the danger of seeking academic responsibility at the expense of usability.

In an attempt to 'intellectualise' these processes and to establish validity there have been many references to research methods used in the social sciences; stressing the need for the inquiry to be concerned with both outcome and method but not outcome alone.

> *'Design is an activity like many others. Its nature is one of creative leaps and iterative processes but these are not exclusively design phenomena...What distinguishes scientific, natural or social research from that in design, is the rigorous approach adopted by other disciplines to reporting their findings and research methods...What distinguishes design research from design per se, in terms of 'an original contribution to knowledge', is the way that it is made accessible to others both in terms of content and process.'*
> (Goggin, 1994, p.13)

Stephen Scrivener (1992) compliments this sentiment but highlights a dilemna:

> *'from other forms of enquiry research is typically characterised by the SORT rule: scepticism, originality, rigour, and testability...Of these criteria, 'testability' causes most difficulty for art and design researchers'*
> (Scrivener 1992, p.5)

If Art and Design is concerned with the process by which new products and artefacts are created, there is a great pressure on research to shed light on more effective and efficient recording and reporting procedures. However, it is possibly more difficult to establish rigour in the validity of its methods to achieve this if it tries to produce a plethora of alternative research paradigms to support them. Scrivener (ibid) proposed a more post-positivistic approach:

> *'The problem for art and design is not the notion of new knowledge but its conjunction with and dependence on the idea of truth. In simple terms, new knowledge acquired through research is generally understood as knowledge "that":*

> *the world is round, that abused children become abusing parents, and so on. This kind of knowledge we can hold to be true until falsified'*
> (Scrivener, 1992, p.5)

Such debates are probably the inevitable outcome that arises from a lack of confidence in an emerging field. As Frayling (1993) said pointedly:

> *'artists and designers do not have to use University paradigms that have ruled the roost for more than 100 years'* .
> (Frayling, 1993, p.5)

The general consensus (for example Gray *et al.*, 1993; Painter, 1994; and Everitt, 1993) in the early 1990s was that the Art and Design sector needed to define research methodologies that responded to its own interests rather than feeling obliged to respond to criticism from other disciplines[11]; ultimately, this would require a new research council. In 1997, Sir Ron Dearing's much heralded report into 'Higher Education in the Learning Society' (Dearing, 1997) recommended that the Arts & Humanities Research Board (AHRB) be established, with the specific remit of furthering creative and cultural research practice and in doing so, enhancing modes of public output.

[11] Colin Painter, former Principal of Wimbledon School of Art has said that the Art and Design sector will do itself damage if it persists in its own uncertainties in Painter (1994) THES, March 18, p.14.

## 1.5 The need for the study

Whilst Art and Design research activity was clearly prevalent before 1992, the stimulus of the RAE meant that Art and Design departments within HEIs began to strategically gear themselves to research (Frayling, 1993). Since 1992, there has been a concerted effort to raise the profile of research activity in this area and with an infusion of nearly £50 million a year through the AHRB, many HEIs have sought to develop their research capability and 'pool' knowledge through newly developed research 'centres'. These centres have the combined roles of forging closer links with industry, spreading funding away from HEFCE teaching income, and largely through implication, heightening the profile of a HEI relative to its peers.

However, a systematic literature review of the leading Educational Management journals[12] for the last five years combined with searches on BIDS ISI and Ingenta Journals[13] bibliographic databases found no articles which specifically targeted the success of Research Centres within Higher Education at all. Indeed, while there has been growing literature on the success factors of Small and Medium Enterprises (SMEs) since the Bolton report (1971) – a field often referred to within studies surrounding Research Centre development[14] – a review of leading journals[15] also found no directly relevant empirical evidence.

Limited empirical research of any direct relevance exists (an area discussed in depth within the next chapter) other than background studies including: profiles of entrepreneurial Research Centres (Sandberg and Gatewood, 1991)[16]; training strategies for Research Centres (DORCISS, 1995)[17]; determinants of research group performance (Harvey *et al*., 2002)[18] and evaluation criteria of ESRC Research Centres (Whiston, 1990)[19]. This led Sandberg and

[12] Higher Education Quarterly, Higher Education Review, Industry and Higher Education

[13] The BIDS ISI service provides access to four bibliographic databases covering scientific and technical information, social sciences, arts and humanities. Ingenta Journals has over 800 of the leading academic journal titles from publishers such as Blackwells Publishers, Blackwell Science, MCB, Arnold, Academic Press and Oxford University Press.

[14] For example Harvey *et al.* (2002), DORCISS (1990) and Whiston (1990; 1995)

[15] Entrepreneurship Theory and Practice, International Small Business Journal and Journal of Small Business.

[16] Sandberg and Gatewood (1991) conducted a survey of 29 entrepreneurial Research Centres and reported on their ages, affiliations, principal research orientations, interests and resources.

[17] DORCISS (1995) carried out an ESRC funded research project to explore the training and development needs of Research Centres in the Social Sciences employing a largely case study approach of 3 centres.

[18] Harvey, Pettigrew and Ferlie (2002) undertook a multiple case study analysis of four medical-related research groups, using exploratory interviews to investigate factors that support successful research endeavour. Factors that they identified with high achievement were: strong leadership; finding, motivation and retaining talent; strategies of related diversification; strongly linked theory and practice and centrally, network connectedness.

[19] Whiston, T. (1990) sought to develop an evaluatory framework for ESRC Research Centres. He interviewed 16 UK Research Centre Directors and found there was a need to produce a flexible framework that took into account the centres own role and objectives. In conclusion, Whiston

Gatewood (1991, p.20) to conclude that *'Research Centres play a potentially influential, though little documented, role in the developing field'*; a view reinforced more recently by Harvey, Pettigrew and Ferlie (2002, p.727) who suggest it is an *'under-researched area'*.

Therefore, with such a dearth of knowledge in the field this research study is clearly timely and overdue, particularly when one considers the existing context of accountability and financial probity within HEIs, whose management are increasingly required to operate in line with current best practice. Furthermore, the Art and Design area provides an ideal field of enquiry to shed light upon Research Centres development – partly because of the researcher's experience in the area[20] and also because it is a fairly new field that provides opportunities for the full range and interaction of factors to be analysed[21].

In this respect, this study will shed new light on the causal conditions and factors inherent within the evolution and development of successful Art and Design Research Centres and in so doing, will enable research leaders and senior managers in the field to make informed decisions over any organisational decisions that could hinder or encourage their future development.

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proposed 8 areas of evaluation: Publications, Data Bank, Dissemination, Education & Training, Managing/Organisational/Strategic Factors, International Reputation, Policy Effects, and Methodological. These indicators were then used to derive a 'profile' of indicators relevant to the centre dependant on the purpose of the evaluation and the 'internal culture' of a particular institute or centre.

[20] The author is an Industrial Designer by training and has ten years experience of design practice in addition to being a budget holder for several research groups in a specialist, Art and Design, University College.

[21] Due to the 1992 eligibility of Art and Design research in the RAE, the majority of Research Centres formed prior to, or as a result of the 1992 exercise. There is a propensity therefore, for founding members of staff who can recount first hand experience of its set-up and development, to still be traceable for interview.

# Chapter 2: Literature review

## 2.1 Introduction

This chapter seeks to identify, evaluate and critically reflect upon current literature that has relevance to the development of Research Centres in UK Higher Education. However, the initial exercise of 'trawling' and 'fishing' the literature (as described by Kane, 1995) highlighted that the research arena showed signs of limited existent knowledge. Therefore, adjacent domains of knowledge have been explored for convergence, notably: Higher Education management and the public-private sector dichotomy of the 'quasi-market'[22]; the evolution of New Public Management theory in education; the management of publicly funded Research and Technology Institutes; and commonly identified factors of small business growth such as the concept of the 'entrepreneur'.

In addition to the need to contextualise the field and demonstrate a command of the subject, the literature review also serves to establish a broad set of themes on which to build an interpretive *framework* utilised within the data collection process (see semi-structured interview protocol described in the research methodology, Chapter 3): the aim being to establish an inward perspective of a Research Centre's operating environment within the backdrop of the HEI's cultural and organisational context of governance and regulatory constraints. However, it is worth noting that further sources of knowledge have become pertinent to the inquiry as the study has progressed[23]. These become the focus of detailed discussion in Chapter 12 (findings and conclusions).

[22] Described by Boyett & Finlay (1994) as an 'internal market' system with budgetry devolution to agents at a 'business' unit level but with regulatory and statutory controls to ensure full-blown privatisation does not occur. With HEI's buying their own resource inputs and selling services direct to the final consumer (primarily students).

[23] Such as the concept of knowledge management and knowledge production for example.

## 2.2 Literature concerning Research Centre development

Limited empirical research of direct relevance exists concerning the development, management and organisational context of Research Centres although some background studies have taken place.

Sandberg and Gatewood (1991)[24] have focused on the profiling of a specific sector – Research Centres whose primary research field is that of entrepreneurship. They recognised that as entrepreneurship as a field of inquiry had grown, so had the number of Research Centres and yet they had developed with little documentation. Sandberg and Gatewood conducted a postal survey of 29 Research Centres – based upon citations – across the United States, Canada, and Great Britain to ascertain their age, affiliation/s, principal research orientations, interests and resources. The findings indicated that the centres were, to a large extent, a diverse and eclectic group but what similarities they did have often related to their funding agencies or constituencies and the corresponding nature of the work being undertaken. Hence, theory-orientated centres tended to have lower research budgets and those with higher research budgets had a pronounced applied research focus, particularly those with government constituents. Whilst this offered a snap shot of a potential cause and effect relationship between funding and research orientation, the authors rightly concluded:

> *'we remain far from having a comprehensive portrait of the interests, constituents, and resources driving the field of entrepreneurship'*
> (Sandberg and Gatewood, p.21)

DORCISS, the association for Directors of Research Centres in the Social Sciences, undertook an ESRC funded project to investigate training strategies and development needs for Research Centres (DORCISS, 1995)[25]. A case study approach was employed using 3 Research Centres whose Directors were members of the association. Interviews were undertaken between 1994-1995 and concluded that for research to be managed effectively the professional development needs of all grades of research staff had to be addressed whilst recognising that approaches to training and development would vary considerably between centres. DORCISS also reported that many models drawn from business and commerce, concerning financial planning and management procedures, had been adopted by the Research Centres studied, but in practice they proved 'inappropriate' due to the University context of

[24] Sandberg and Gatewood (1991) Conducted a survey of 29 entrepreneurial Research Centres and reported on their ages, affiliations, principal research orientations, interests and resources.
[25] DORCISS (1995) carried out an ESRC funded research project to explore the training and development needs of Research Centres in the Social Sciences employing a largely case study approach of 3 centres.

annual budget bidding and 'soft' resource allocation models – such as free access to space and equipment for which they were not charged. The outcome of the research led to a series of workshops and staff development handbooks.

The DORCISS study was primarily intended to address a pre-determined need by the association's members to improve and enhance professional development for research staff. Although this study was research council funded, it was clearly focused toward the delivery of training materials as opposed to rigorous empirical inquiry. The study does, however, highlight the potential impact of staff development and training on the development of the Research Centre and the difficulty of introducing simplistic business models into a Higher Education context. Indeed, the fact that DORCISS as a group[26] of subject experts felt the need to address this area is in itself a valuable finding.

Other research has focused upon evaluation criteria for Research Centres. Whiston (1990) was funded by the ESRC to establish evaluation and performance indicators for the ESRC's funded Research Centres. His approach was to interview 16 Research Centre Directors to identify an appropriate evaluation methodology and corresponding performance measures apposite to a University context. His research identified that a flexible framework needed to be adopted which enabled localised interpretation: to take account of the unique context in which each centre operates. The basis of the framework included 8 potential evaluation indicators including: number and quality of publications; the 'data bank' of knowledge created, dissemination 'to' and utilisation 'of' the research by respective audiences; education and training of staff; the management, organisational operation and the strategy adopted; international reputation; policy effects; and methodological enhancement and development in the field. Whiston's proposal to the ESRC was to derive a 'profile' of indicators, which would be drawn from this list dependant on the purpose of the evaluation and the 'internal culture' of the Centre under scrutiny.

Whiston's (1990) study highlighted the difficulty of applying seemingly external and quantitative measures, which might seem reliable and verifiable in their own right (such as a citation indices) – to the operational and qualitative context of a Research Centre in a University. His conclusion that performance measures should be 'tailored' to the individual Research Centre recognises that the process of knowledge production, in the ESRC centres at least, is as much subjective (the way the respective audiences perceive the contribution) as it is objective (measurable through externally auditable means).

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[26] This could be likened to Madriz (2000) definition of a focus group - 'a collectivistic rather than individual research method that focuses on the mutivocality of participant's attitudes, experiences and beliefs' (p.836).

More recently, Harvey *et al*. (2002)[27] have followed in this line of inquiry to try to identify determinants of research group performance. The study provides a valuable contribution to current literature in respect of potential factors that facilitate the successful development of research groups. Harvey *et al.* undertook a cross case analysis of four medical-related research groups, using exploratory interviews (based upon themes derived from a quantitative survey[28]) to investigate factors that supported successful research. The study explores the research group as a distinct organisational and management entity within the wider environment of Higher Education medical research and specifically, sought to establish whether likely factors of business success – such as the concept of entrepreneurship – had an effect on research group performance.

Harvey *et al*. (ibid) found factors which were identified with high achievement: strong leadership; finding, motivation and retaining talent; strategies of related diversification; strongly linked theory and practice; and centrally, network connectedness. The author's argued that the factor 'network connectedness' provided a high degree of synergy with the leadership's ability to be 'enterprising': seeing links to new funding opportunities; spanning boundaries between the public and private sectors; and taking risks in order to maintain the strategic 'knowledge advantage' of the group.

The study by Harvey *et al.* (ibid) concurs with much of the work of Roworth-Stokes and Perren (2000a) who recognised that the 'entrepreneurial career anchor' (Schein, 1990) played a significant part in the career progression of Research Centre Directors[29]. However, the approach adopted by Harvey *et al*., initially conducting a survey to elicit themes associated with success, would appear to have limited the opportunity to probe for any causal relationships in the analysis of their findings. Thus, the identification of network connectiveness as a key determinant does not explain underlying factors (such as personal relationships or mutual career objectives between Research Directors and stakeholders) that

[27] Harvey, Pettigrew and Ferlie (2002), undertook a multiple case study analysis of four medical-related research group, using exploratory interviews to investigate factors that support successful research endeavour. Factors that they identified with high achievement were: strong leadership; finding, motivation and retaining talent; strategies of related diversification; strongly linked theory and practice and centrally, network connectedness.

[28] This is evident in an earlier draft of the work (Harvey *et al.*, 2000) which was obtained by the author through personal correspondence with Professor Andrew Pettigrew.

[29] The paper examined on a case by case basis the relationship of cause and effect during critical moments of career progression. The research identified that there was an underlying relationships between the 'entrepreneurial' and 'autonomy' career anchors of Research Centre Directors and the corresponding impact on power relationships as their personal capital grows. In conclusion, the paper reports that a Research Centre Director's career trajectory may be determined not only through responsibilities and research reputation in the field but also through skilful application of political nous, strategic awareness, and tact in marrying internal research agendas with that of the Research Centre.

may have played a critical part in the development of the research group over time. Equally, the Higher Education context is not accounted for in the respondents interviewed and therefore issues such as the changing balance of autonomy and power levels – between senior managers in the host organisation and the Director and staff of the research group – cannot be explored.

Having identified the empirical work at the foreground of this study, the following sections will now focus upon the broader context of Higher Educational reform and will seek to unveil other domains of knowledge that are pertinent to the study.

## 2.3 The current context of UK Higher Education

It is clear that the *'hurricane of* [Educational] *reforms centered on the period from 1985-1992'* (Henkel, 1997) have exacerbated the context in which Research Centres operate. The focus of the literature review from here onwards will therefore be constrained to the period from 1985 onwards.

The '*massification'* of education described by Trow (2000) has led to fundamental change in Higher Education – most notably the growth in student numbers brought about by successive government policies to harness the knowledge developed in Universities for economic and social ends[30]. These changes were driven by the Jarratt report of 1985, which set in train a series of policies that sought to make the sector establish clearer objectives and achieve evidence of value for money. This would eventually affect the previously high degree of autonomy within the governance and management of Universities.

Universities had been *'the custodians of their own performance and standards'* (Cave *et al.*, 1997, p.5) with the ability to make their own appointments for external examination, and funding through the UGC which was *'in effect, peer judgements made on a reputational basis'* (ibid., p.5). The Polytechnics and colleges were however in a slightly different position at this time. The allocation of their funds was still in the hands of local authorities and the Council for National Academic Awards (CNAA) controlled external validations and review. Whilst CNAA employed peer assessment strategies, the peers were often drawn from the Universities and hence outside of the Polytechnic sector itself – thus enforcing the perception of hierarchy.

In 1988 the Education Reform Act began to change the Higher Education landscape, affecting both Polytechnics and the Universities cultural and managerial structures. In addition to creating new funding councils for Universities, Polytechnics and Colleges (UFC and PCFC), the Act enabled Polytechnics to become independent of local education authorities and provided for incorporation of non-University institutions[31]. This enabled them to move away from the local authority governance which was substantially bureaucratic (Henkel, 1997). Consequentially this led to some fundamental alterations to the previous organisational context; primarily in the institutions demands on financial departments for the purposes of

[30] The 1991 White Paper 'Higher Education: A new Framework' (HMSO, 1991) had forced HEIs to dramatically increase efficiency through a policy of funding that increased student numbers at less cost per unit.

[31] The PCFC report, 'Research in the PCFC sector', published in 1990, also highlighted disappointingly low levels of funding being attracted by polytechnics from the Research Councils, also identified that Art and Design 'merited some pump priming because it was excluded from previous research funding' (Allison, 1994).

control and accountability; human resource departments to administrate personnel issues; and registry to ensure procedures maintained academic standards. By 1992 change was on its way again. The Further and Higher Education Act brought an end to the 'binary divide' between the Universities and Polytechnics and also did away with the UFC and PCFC funding bodies which were replaced with the Higher Education Funding Councils for England, Scotland and Wales, and the Department of Education Northern Ireland (DENI). All Polytechnics and colleges that could meet strict criteria were given degree awarding powers and the right to call themselves Universities. A more comprehensive system of quality control was introduced, *'a component of which was compulsory assessment by the funding councils of the quality of higher education'*. (Cave *et al.,* 1997, p.8). Institutions retained control over quality assurance and quality enhancement under the aegis of the Higher Education Quality Council (HEQC), established in 1992 as a limited company, which was owned and funded by the Universities and colleges of higher education: leading to standards of Higher Education across the Universities and former Polytechnics becoming publicly auditable and assessable[32].

[32] Through the Quality Assurance Agency (QAA) in respect of subject reviews, established in 1997 (formerly the HEQC's Quality Audits between 1993-1997), and the RAE in terms of Quality Research ratings.

## 2.4 New Public Management (NPM) theory

Henkel (1997) in her study of academic values in the post binary divide era[33] found that HEIs are responding to current pressures of quality assessment and assurance policies by drawing upon substantially post-bureaucratic or 'new public management' thinking. Higher Education has not been alone in respect of government intervention to introduce market mechanisms with public audit and assessment procedures. In this respect the 1988 Education Reform Act sits alongside similar legislation such as the National Health Service and Community Care Act of 1990. This ideology has had far reaching impact on the whole of the public sector and has necessitated a corresponding link to new patterns of organisational structure and public sector management. The key features to these reforms involve:

> *'lessening or removing differences between the public and private sector and shifting the emphasis from process accountability towards a greater element of accountability in terms of results'*
> (Hood, 1995, p.94)

New Public Management has therefore, become driven by the desire to generate good management practice in the public sector, the nature of which is heavily influenced by accounting logic (Broadbent and Laughlin 1998). This can broadly be recognised within HEIs through Henkel's (1997) findings from her study of post bureaucratic Universities:

a) 'Centralised decentralisation'

Strong management has become a feature of Universities due to the need to manage corporate strategies and structures for academic development in response to external policies. Institutions now consider their markets and respond to their clientele by introducing new courses which target non-core[34] income sources[35] as part of an institution's policy for collaboration with business and other partners. In practice this has led to more defined responsibilities for staff and a proliferation of cross-institutional and non-disciplinary support units. These units such as those for quality assurance, teaching and learning, staff development, and enterprise initiatives are also promoting change across departments.

[33] Study conducted by the Centre for the Evaluation of Public Policy based upon 6 University case studies and 105 interviews with University leaders, Deans, academics, administrators and Heads of Departments.
[34] As defined by the HEFCE as areas of income/expenditure which fall outside the core annual grant for teaching and learning.
[35] Such as funded initiatives, for example European Community programmes and the Enterprise in Higher Education initiative.

> *'Shifting the locus of control of initiative for the development from departments to the centre, from discipline to the enterprise'* (Henkel, 1997, p.137).

Furthermore, a major development within the sector has been the evolution of devolved budgeting. Academics with programme or other responsibilities are expected to manage budgets in line with predetermined objectives and are held to account for the achievement of those objectives to line managers at the end of the year.

> *'devolution must be contained within a framework of a broad strategy outlined within the strategic mission statement of the institution'*
> (Benjamin, 1996, p.75)

b) 'Flexible forms of organisation and conditions of employment versus functional differentiation'

HEIs are developing more differentiated and performance related contracts, fixed term contracts, research only contracts for those staff perceived to be eligible for RAE submission together with teaching only contracts for those who do not wish to publish. The balance of duties is increasingly weighed on the basis of output potential and roles are 'freed-up' of administrative loads to meet strategic aims. Yet, in general increases in administration and management have become an integral part of academic life – 'Managing' student learning has become common terminology.

> *'Academics find they must, for example, not only generate new courses; they must cost them and ensure they can stand up to hard external scrutiny'*
> (Henkel 1997, p.138).

c) 'Status and power differentials'

To some extent there is a re-balancing of the power differentials between administrators of the so-called support units such as personnel, registry, estates, and senior academics. As increasing scrutiny is placed upon the academic activity due to transparency of systems and procedures, new staff are finding roles evolving and directly impacting upon the primary responsibilities of the institution. Thus the move from bureaucratic to post bureaucratic can mean tensions in previous status and power differentials due to changing institutional priorities.

> *'External demands for internal quality assurance systems strengthened the hands of administrators in steering institutions to a more systematic approach to quality and gave them authority to put pressure on academics'*
> (Henkel 1997, p.140).

Fielden (1991, p.75) recognised that as a consequence of these changes the sector had started to embrace *'the concept of entrepreneurialism'*. The direct linking of the word 'enterprise' to Higher Education was also re-inforced by the earlier Enterprise in Higher Education Initiative, launched in 1988 to embed entrepreneurial skills into graduates. The Segal, Quince, Wicksteed (1994) report recognised a more important by-product of the initiative in the higher profile attached to enterprise within Higher Education: it had led to an increased body of experience in departments promoting a better understanding of enterprise, particularly those who were actively involved in enterprise.

Another funding initiative, which has driven the need to foster 'enterprising' and collaborative links with industry and commerce, is the Private Finance Initiative (PFI). Largely impacting on capital expenditure, the initiative has been heralded by the Government as a means to cut capital funding, reducing the cost to the taxpayer from £350 million for 1995/6 to £181 million by 1998/9[36]; changes which represent the government's ambition to reduce dependence on state funding by introducing market mechanisms into higher education (Cave *et al.*, 1997).

Thus, the current context in which HEIs operate is therefore based upon the adoption of flexible strategies to derive competitive advantage when opportunities arise in a climate of sectoral uncertainty, or as Martin Trow put it:

> *'coping mechanisms, strategies for short- and long-term survival, which themselves have unknown consequences for teaching and learning in the Universities. It is these coping mechanisms, particularly in the departments, which I believe are currently shaping British Higher Education, its very texture and quality in the true and not in the public relations sense of the word'*
> (Trow, 1994, p.4)

[36] Figures forecast on 1995/6 levels, HEFC, source Department of Education and Employment and Office of Science and Technology.

## 2.5 The public-private sector dichotomy

Harvey *et al.* (2002) proposed that the uncertain and increasingly competitive environment of Higher Education had led to research groups being increasingly ‘market’ orientated in a similar vein to the ‘small business’ model. Yet, there are inherent characteristics that make HEIs differ from business organisations. These characteristics can largely be defined as those of 'governance', such as their legal status, decision making processes and authority patterns (Birnbaum 1988). In addition and unlike other business sectors, HEIs have no single clear 'bottom line,’ they have several, while business inevitably must respond to the profit measuring stick; even if this is not the case over the short term it most certainly is over the long term (Drucker 1990). Therefore, HEIs do not have the pleasure of dealing with one group of stakeholders and this is reflected in the representation at various levels of the organisational structure. HEIs must operate in a complex manner to meet the needs of both the clients (to whom they provide goods and/or services) and donors (from whom they receive resources); utilising all available funding, with any ‘surplus’ of funds at the end of the financial year being ploughed back into the institute’s strategic resource provision.

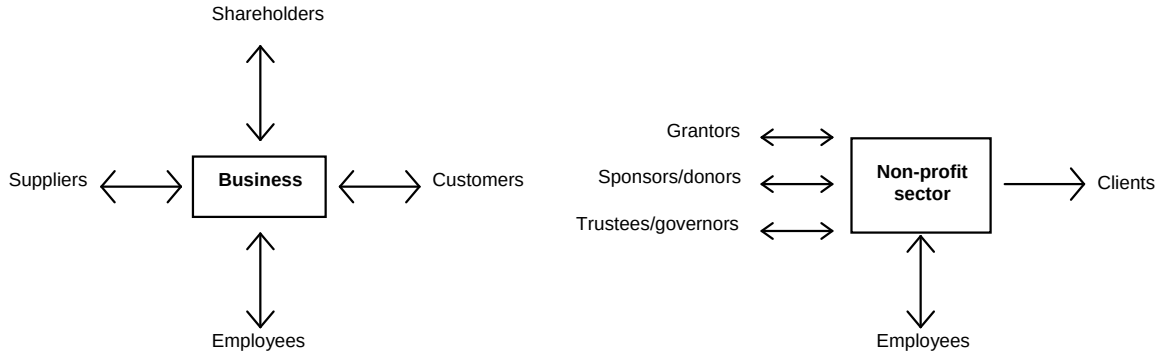


Figure 2.5.1 The stakeholders of typical business and non-profit organisations (Batsleer, Cornforth, and Paton, 1992, p.40)

However, HEIs and the Research Centres which operate within them, are currently faced with two major pressures that directly mirror the private sector. Firstly, they must continue to increase efficiency where possible but they will to a large extent have to *'find new contexts for their work as well as being able to diversify their sources of income'* (DTI 1989, p.1) towards non-HEFCE funded business. Secondly, in order to meet the needs of this new business they must differentiate themselves from the competition and highlight the *'value added'* (CIHE 1992, p.1) so that they can identify their specific competence and expertise when dealing with industry partners.

### 2.5.1 Organisational context of Higher Education institutions

The speed of the decision making processes required to manage HEIs entrepreneurially requires widespread agreement amongst trustees, the executive and Deans of Faculties[37]. Often due to the complexities of administering and managing the 'governance', organisational difficulties arise when specialist knowledge to operate appropriate procedures leads to decision making processes and resource acquisition becoming confined to isolated conclaves. Birnbaum (1988) sees this often leading to a 'duality' of controls within HEIs. With two decision making structures operating in parallel, the conventional administrative and management hierarchy (conventional to business structures) and the committee structure through which the academic community achieves consensus (both within and across faculties).

Whilst the business sector and HEIs must always ask whether their resources are being employed in a cost effective manner, a HEI must monitor and record resource utilisation as much for internal use as for external inspection and evaluation. For example, monitoring information will be required by the funding councils and subsequently published by the Higher Education Statistical Agency (HESA), who are entrusted with the job of compiling statistics from across the sector.

Common manifestations of organisational strategy and resource policy do exist between the two, including mission statements and service level agreements, but here again, the need to do so is clearly driven by differing forces. Business can often be represented by statements, which identify a place within a market, and the level to which it expects to perform within that market. HEIs cannot take such a market driven approach and mission statements in particular tend to represent many more 'stakeholders' inside and outside the organisation including students, employer groups, grant authorities and regulators.

Differences also exist in the extent to which leadership is able to direct staff due to the complex nature of employees' motivations and organisational structures,[38] and it becomes increasingly important within HEIs that leadership seeks to represent 'stakeholders' views. Whilst Universities do compete in a market-place for both students and research funds, as

[37] For example the Warwick University and University of Salford have both declared a distinct 'near market' focus through the mission and policy statements to HEFCE which has been described by many commentators as characteristic of an entrepreneurial University (Clark, 1998; Shattock, 1983).
[38] Birnbaum (1988) and Kerr and Jermier (1978) all recognise that motivations and rewarding mechanisms are clearly different within the public and private sectors. Not only due to most employees within the public sector being part of National wage bargaining and incremental pay levels but also that these employees often exhibit stronger loyalty to there own professional affiliation as opposed to the organisation for which they work.

with the private sector, if they fail to meet the necessary funding targets they must either cut their cloth accordingly or wither and die.

Therefore, it is primarily the 'governance' issues that differentiate the two sectors and because of this, the 'market' in which HEIs operate has been called a 'quasi-market' (Boyett and Finlay 1994); created by the 'internal market' system with budgetary devolution to agents at a 'business' unit level but with regulatory and statutory controls to ensure full-blown privatisation does not occur. The 'quasi-market' can be identified in Higher Education due to the state remaining the principal funding source but with each HEI choosing its own mix of resource inputs and selling its services direct to the final client (primarily students).

### 2.5.2 Statutory and regulatory governance

HEIs operate in quite a different legal framework to business by virtue of being charities under the Charities Act of 1993 or the Education Reform Act of 1988. Whilst regulations and legislation remain broadly similar in respect of employment, building, maintaining safe premises, food hygiene, data protection and copyright and patents, there are also fundamental differences:

- HEIs are exempt from corporation tax, income tax and capital gains tax (Benjamin, 1996) although there are certain instances when VAT is chargeable in the case of specific applied research, training or consultancy for UK sponsors if this is deemed to be largely commercially orientated[39].
- The vast majority of funding income comes directly from government. Approximately 60%[40], comes from the funding councils and is largely regulated by strict guidelines with minimal room for 'top-up' fees to be charged within the sector. Of this 75% of income from tuition fees is paid directly by the funding councils and 25 % is paid directly by the student to the institution (Dearing 1997). Published accounts of HEIs are required to contain an audit certificate confirming that the funds have been applied for appropriate educational purposes.
- HEIs are regarded as 'non profit' organisations and are required to operate within available income. Therefore, expenditure is likely to be closely related to income (Sandbach and Thomas, 1996).

[39] However definitions and application of this are often variable depending on the VAT office.
[40] In 1993/4 the total income of HEIs as recorded by the former UFC amounted to £5598m with council funding for teaching, research and projects amounting to £3341m.

- The HEFCE code of practice places on HEIs the requirement to appoint an audit committee: to ensure performance measures for internal and external audit to promote economy, efficiency and effectiveness. The auditor's report must be forwarded to the funding council with the institution's response.
- Universities founded subsequent to the Further and Higher Education Act are subject to particular articles of government approved by the Secretary of State. These articles (a charter and supporting statutes approved by the Privy Council in pre 1992 Universities) consist of specific details on issues such as: a) having a board of governors (the Council in some pre 1992 Universities) with responsibilities including determining the institute's mission and approval of financial forecasts together with the appointment of external auditors; b) a head that has chief executive responsibilities for the overall management of the organisation, its financial well being, leadership and other duties set within the framework of the board of governors.

Governing bodies must also have a lay majority (lay officers are roughly equivalent to Non Executive Directors – the only exception to this rule is Cambridge and Oxford) and in theory the power resides in the hands of those not employed by the University.

## 2.6 The Research Centre as an enterprise

> *'In several ways a Research Centre may be seen as an equivalent to a private enterprise in competition with other units and responding to the vagaries of the market-place.'*
> (Whiston, 1990, p.15)

Although many academic commentators may not be keen to consider the similarity, Research Centres do seek to promote a separate identity and reputation to that of their host HEI in much the same way as an independent private sector enterprise. Research Centre Directors try to maximise sources of funding, market products and services, and satisfy staff expectations in relation to defined goals, targets, and mission statements. Whiston (1990) argues that in the context of ESRC reviews, Research Centres undergo evaluatory procedures to understand their own organisational dynamics better and to present those organisations to evaluators in the best possible light. Other studies echo this:

> *'Research Centres are dynamic organisations operating in a turbulent environment. It is not enough to see your Centre as it really is, it is also important to see your Centre as you want it to be'.*
> (DORCISS, 1995, p.9)

Whiston (1995) in his study into the careers of contract researchers in thirteen ESRC Research Centres, recognised the need to understand the evolutionary phases of growth and development in the same way as those that affect business. He concluded that the Centres studied, which were all ESRC funded for a maximum ten year funding period, had a life cycle which could be identified within three stages. Firstly, the 'taking off' stage, when a Centre had recently received major funding and appeared young and thriving; often within fields of research that themselves appeared to be 'taking-off' with high levels of external interest. Secondly, the 'plateau' stage, being identified with a consistent level of resourcing based upon a stable reputation in its markets and expertise gained. Lastly, the 'in decline' stage, this being characterised by the Research Centre encountering severe financial difficulties with research funding being withdrawn. These circumstances obviously had a distinct effect on the internal dynamics operating within the Centres' studied. Whiston's findings indicated that in resemblance to other enterprises the stage of growth and the sustained competitiveness of a Centre had a direct effect on staff morale and motivation.

It can also be argued that Research Centres also have similarities in the way they manage resource acquisition to other business enterprises. If we follow the view of Batsleer *et al.*

(1992) that trading organisations have a direct relationship with customers in deriving revenue and non-trading organisations do not, in many ways Research Centres can be said to be trading organisations in common with small business – as their service delivery (output such as knowledge, products or services) is also often their resource acquisition (input such as research council contracts or industry consultancy). Unlike the core business of the host HEI which could be deemed to have little control over the balance of inputs and outputs except by reducing internal overheads in a non-trading operating environment, a Research Centre has much greater control over its pricing of outputs. This also strengthens the view that Research Centres have the strategic capability to switch to new lines of business if minimal resource input exists by redressing the balance between service delivery and resource acquisition.

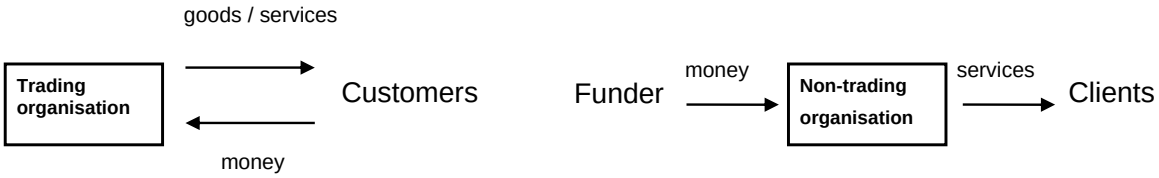


Figure 2.6.1 Resource acquisition in trading and non-trading organisations (Batsleer, Cornforth, and Paton, 1992, p.38)

Whiston (1990) goes on to say in his review of evaluatory criteria for the ESRC of Research Centres , that a simple Stimulus Response (S-R) model to evaluate a centre will not disclose the 'tonal' quality of the organisation and hence its ability to continue to perform in the future:

> *'the organisational structure of an institute or centre and its attendant plans, managerial and strategic emphasis requires to be understood and evaluated just as much as output measure…In a forward-looking or dynamically evolving sense, evaluation should attempt to derive a measure of how a centre is not only performing, or has performed up to now; but how its structure, plans, staffing, recruitment, operative skills lend themselves to further development'.*
> (Whiston, 1990, p.6)

Whiston's recommendation to the ESRC was to operate an S-O-R model (Stimulus-Organisation-Response), evaluating performance indicators through appropriate inputs and outputs based upon the organisational dynamic in which they operate. Whiston draws reference to a Research Centre as an 'enterprise' as defined by Peters and Waterman (1982) in which he recognises that the whole character of an enterprise is affected by management capacity to stimulate an environment in which entrepreneurial aptitude is encouraged throughout its human resource.

Research Centre Directors are in a position to stimulate a dynamic working environment. Flexibility within the human resource is also afforded through Contract Research (CR) staff, enabling rapid response to opportunities afforded through new enterprises and new lines of business. Whiston (1995) found that CR staff accounted for 40% of all research staff employed within Higher Education. Although full time research staff may be subject to national wage scales and pay bargaining, Research Directors can put together the research teams as priorities change by using short term contracts with minimal disruption or long term contractual obligation. Although many groups have commented on the lack of career structure for Research Centres (AUT, 1994), the Select Committee conceded that one of the primary advantages of using such staff was that:

> *'a research worker who goes off the boil or loses enthusiasm or skill can easily be removed without any contractual or redundancy problems'.*
> (House of Lords Select Committee, 1995, Chapter 4 'Summary of Evidence')

## 2.7 The relevance of other domains of knowledge

Existing studies therefore support the view that Research Centres are similar to private enterprises in several distinct ways. Firstly, Research Centres are acting as a trading organisation whilst responding to the market place of knowledge. Secondly, Research Centres are often promoting a separate identity and a reputation independent to that of their host HEI and lastly Research Centre Directors try to balance the allocation of resources against the need to satisfy staff expectations relevant to defined goals, targets, and mission statements.

However, in the search for relevant literature to derive a thematic *framework* it is not as simple as purely suggesting that the management literature on small business growth in itself will provide a solution. There are other issues that arise as a result of the relationship with the host HEI, such as the Research Centre's strategic direction which must respond with a degree of synergy to the institutions research priorities. Without commitment at a senior level the Research Centre's existence within the HEI is unlikely to be sustained. It is therefore worth exploring some of the issues that arise from the text covering academic research management and the management of research and technology institutes who have similar stakeholder relationships.

### 2.7.1 Academic research management

The linking of goal orientated planning to academic research is a relatively recent phenomenon within the last 10 to 15 years (Zaidman, 1997). Research performance indicators have reflected a complex mix of policy changes and technological advances. Since 1985 there have been five RAEs which have derived quantitative indicators of research quality and performance within HE, based upon the main criteria of:

> *'-publications or other identifiable output;*
> *-success in obtaining research grants and studentships;*
> *-success in obtaining research contracts;*
> *-professional knowledge and judgement of advisory group and panel members, supplemented where appropriate by advice from outside experts '*
> (Cave *et al.*, 1997, p.161)

The idea that there is a benefit to national economies through some central planning of scientific and technological research (Freeman, 1987) has also gathered momentum and led to a greater political focus on the need to quantify the nature, objectives and outcome of

research. *'There is no doubt that across HE the management of research has assumed greater importance'* (Hogan and Clark, 1996, p.127). Therefore from the perspective of managing an academic department a strategic balance has to be struck between targeting research activities toward governmental and industrial research priorities on the one hand and maintaining academic standards on the other (Zaidman, 1997). Most institutions cannot hope to be strong in all areas of research and an inability to build on strength and concentrate resources can seriously affect a University's research profile.

The selection of strategic research priorities for an academic institution invariably involves decisions based upon academic potential (relative to performance indicators); correlation of existing research areas to existing capabilities; and the benefit of the anticipated outcome at either regional or national level (market potential and opportunity for profile building). Selection of research priorities can therefore be based upon attributes which best comply with the institute's own research agenda. Zaidman (1997) points out that any implementation of this policy in a non-hierarchical organisation, such as an academic one, depends upon its interpretation by specific academic units who may have their own beliefs and interests, size and degree of authority.

A tension also exists in respect of the view that research initiatives are driven by individual researchers or research groups who champion projects and take the initiative as research opportunities come along. So often the strategic research management leads to plans which *'set a small number of* [research] *priority areas and retain development funding for the best new initiatives that arise'* (Hogan and Clark, 1996, p.128).

### 2.7.2 Stakeholder influence

The management text on stakeholder groups informs us that failure to respond to stakeholder interests may be detrimental to business performance (Greenley, 1997). In the private sector, stakeholders include individuals or groups who are affected, or can affect the achievement of an organisation's purpose (Clarkson, 1995). This amounts to associated companies, shareholders, employees, consumers, competitors, unions and suppliers. HEI stakeholders are equally diverse but have more public audiences to represent including funding councils, government, regional authorities and regional Universities/college alliances. This is in addition to demand and supply side stakeholders such as students, employer groups and trade bodies, which makes for a complex picture with a myriad of different constituencies and vested interest within HEI activities.

Strategically Research Centres can play an important specialist role on behalf HEIs in meeting the expectations of industry groups, research councils and professional associations (see below).

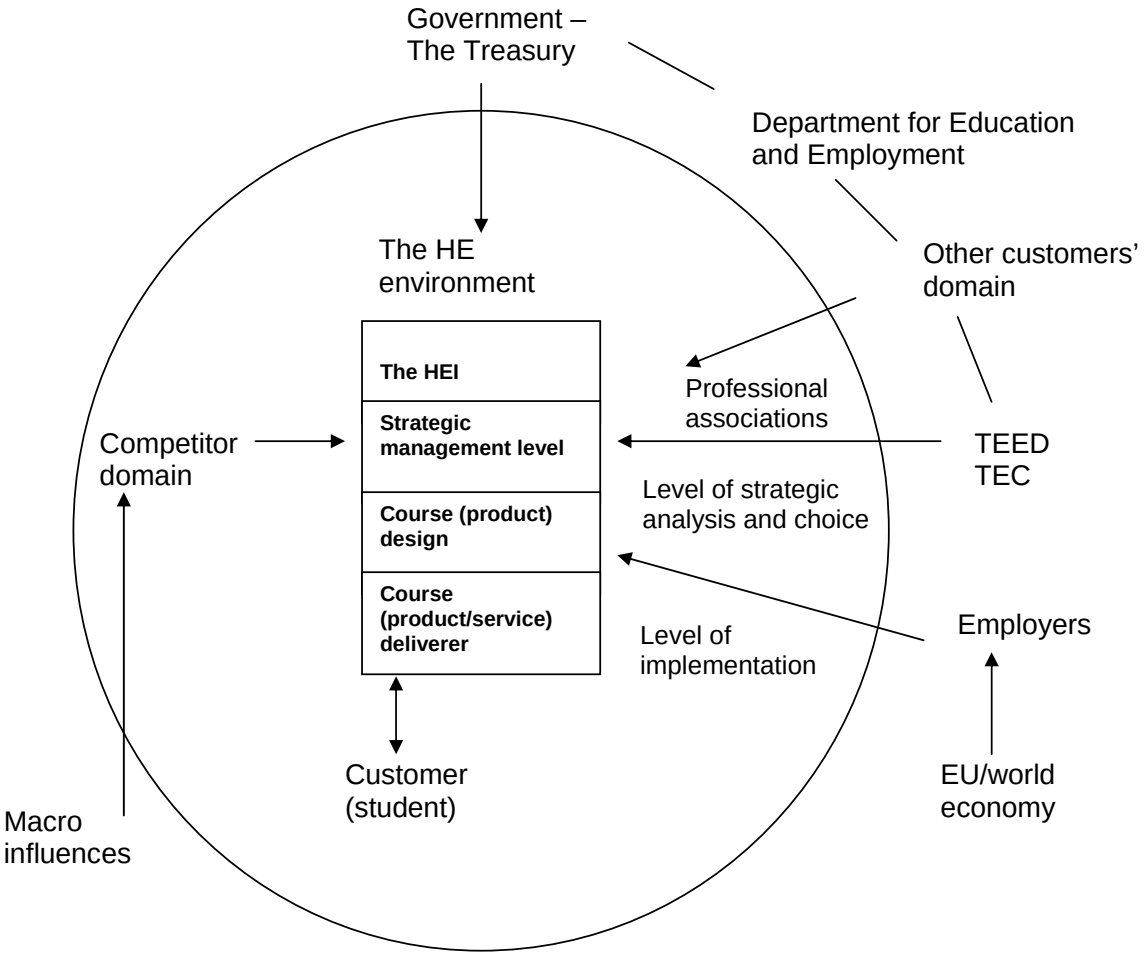


Figure. 2.7.2.1 Environmental influences affecting HE management decision-making (Rowley, 1996, p.169)

### 2.7.3 Research and Technology Institutes

At national level Research and Technology Institutes (RTIs) have had a powerful influence on economic and technical development (Arnold *et al.,* 1998). RTIs' role in a nation's innovatory system drawing on national and international industrial and scientific knowledge to support industry, is however, now being tempered with concerns about efficiency and value for money. Economies facing recession, liberalisation or privatisation have sought reductions in public resources and have evaluated RTIs respective role to industry in stimulating advanced technology and innovatory systems. Whilst on a different scale and level to Research Centres, the RTIs have similar constitutional issues, such as being primarily non-profit orientated and having equivalent types of stakeholder issues that impinge on their success. RTIs must meet the political demands of national innovation policies to move technology ahead of current market needs whilst still remaining in touch with industrial demands to derive technology that can increase efficiency and has market potential.

Rush, Hobday, Bessant, Arnold and Murray (1996) conducted a benchmarking study into nine of the most successful (by peer review) RTIs in Europe, North-America and East Asia which identified generic factors underlying their achievements. Their findings indicated that operational reasons for poor performance stem from a failure to run the RTI like a business, even though none of the RTIs studied were established as a private business.

> *'We believe that increasingly strategic clarity and operational effectiveness will be key to the ability of RTIs to perform to their special roles in the innovatory system'*
> (Arnold *et al.*, 1998, p.90)

Arnold *et al.* also notes that RTIs are increasingly seeking to increase their sources of private funding and are being forced to focus on the type and range of services they provide relative to their existing and potential customer base. Hence their management structures, leadership and personnel are being re-evaluated. The table below identifies Arnold's classification of success factors.

| Internal | Negotiated | External |
|---|---|---|
| Leadership | Industrial input | Stable policy |
| Defined strategy | Market responsiveness | Consistent funding |
| Flexible structure | Networking | Demanding users |
| Training | Learning from firms | Government commitment |
| Technical competence | Links to policy making | Macro-economic growth |
| Project management | Links to Universities | Industrial development |
| Personnel management | Image and awareness | |
| Good communication | | |
| Technology search | | |

*Note:* Internal – factors under the direct control of the institute
External – factors outside the control of the institute

Table 2.7.3.1 Classification of success factors for RTIs (Arnold *et al.*, 1998, p.93)

Arnold *et al.* (1998) went on to recommend improvements in the operating processes and systems within RTIs. These were drawn into four categories of Marketing, Human Resource Management, Management Systems, and Governance.

The following table seeks to summarise these recommendations:

| *Category* | *Recommendation* |
|---|---|
| Marketing | Write and maintain a marketing strategy and plan |
| | Create awareness of the institute through publicity material |
| | Identify and manage large potential clients (accounts) |
| | Systematically identify and promote to other potential buyers |
| | Create and maintain systems to manage the marketing process |
| Human Resource Management | Value experience in industry with a possible mix of staff comprising: |
| | One-third experienced engineers to two thirds younger graduates |
| | Each technological group has one industrially-experienced member |
| | Where this is not possible institutes should try to place staff members in extended placements within industry |
| | Rotate teams to contribute to the diffusion of industrial experience |
| Management Systems | Introduce Management Information Systems to track projects and keep tight control on time |
| | Cost analysis and project tracking costs are essential to tracking ongoing institute profitability |
| Governance | Split governance between; |
| | -a high level 'oversight' body and; |
| | -a technical board made up of senior technologists from industry |
| | Meetings should be at least four times a year and review technical aspects of the institute's work |
| | Representation on boards should be weighted in favour of industry |

Table 2.7.3.2 Recommendations of best practice operating systems within RTIs (Arnold *et al.*, 1998, derived from pp. 97-99)

The issues arising from the RTI studies indicate a more business-orientated style of thinking having been evident in the best practice cases.

As has already been stated Research Centres bear many similarities to RTIs. The next section aims to explore whether this analogy and the RTIs' relationship with the business model extends to that of the Research Centre.

## 2.8 Small business growth

Gibb and Davies' (1990) review of the small business growth literature suggests five categories to embrace the different areas of potential influence: the impact of the 'entrepreneurial personality'; the 'owner manager's influence' on the organisation; 'business' skills and the role of functional planning, control and formal strategic orientation; and lastly the 'macro' view in respect of industrial economics and regional development. If one considers the owner manager's influence within the broader concept of the entrepreneurial personality, there are in essence, four areas which affect the growth of the small business – entrepreneurial personality, organisational development factors, business management and sectoral issues.

### 2.8.1 Entrepreneurial personality

The personality dominated factors are often identified by researchers through entrepreneurial characteristics, traits or behaviour such as being a risk taker and innovator. In the development of small and micro-enterprises the owner-managers are seen as crucial to business success (Handy, 1985) and often analysis will then begin with the identification of key psychological traits. However definitions of the term entrepreneur and entrepreneurial traits differ between researchers (Gartner, 1989; Chell *et al*., 1991). In addition, many researchers (for example Gibb and Davies, 1990) imply that more often than not, the entrepreneur is risking his/her own capital. Whilst this is at odds with the notion of the public sector, the Education Reform Act of 1988 has led academics to comment on the emergence of the educational entrepreneur (Boyett and Finlay, 1994); individuals that have learnt to seize the opportunities afforded by market imbalances created by enforced sectoral change.

Indeed this view is supported by the notion that evidence of successful entrepreneurship is provided by a market capability to respond quickly to change (Kirzner, 1973). HEIs painful but adept response to legislative change – most notably raising since 1982 to 1996 the ratio of 18 year olds participating in Higher Education from one in ten to nearly one in three[41] – might demonstrate entrepreneurial capability within the educational sector even if the motivational factors may be quite different. Whilst the setup and development of a Research Centre is undoubtedly affected by the Research Centre's founding Director (Roworth-Stokes, 1996), an interpretive *framework* incorporating their entrepreneurial traits would need to take the view of an entrepreneur as an incrementalist in his/her behaviour[42] as opposed to an innate risk

[41] Figures from the THES (1995).
[42] A view supported by Gibb and Scott (1985) and Gartner (1989).

taker, which would be hard to equate within the public sector environment in which such regulatory systems exist. Furthermore, a broader view of the entrepreneur within a Research Centre may need to be borne in mind. Whilst the Research Centre's founder may well need to demonstrate entrepreneurial traits, as with the small business owner manager, the originator may in fact be a senior manager within the HEI who has orchestrated the environment for such an initiative to flourish.

### 2.8.2 Organisational development

Much of the text that investigates organisational development factors aims to explain the various developmental stages in the growth of a small business. Gibb and Davies (1990) categorise these as:

> *'the relationship between personal objectives and business goals including also the influence of the family; literature relating to the stages of growth model of the firm from small to large with associated characterisation of management and organisational development including propositions about the changing role of the entrepreneur; and the influence of networks and the impact of these on entrepreneurial behavior'.*
> (Gibb and Davies, 1990, p.20)

In this area of influence much has been written on the development from a small firm – when the entrepreneur and the firm's goals are substantially synonymous – to a growth orientation incorporating professional managers when the entrepreneur is willing to dilute ownership in order to see the firm grow[43]. Here, the founder's ability to deal with loss of control can be seen as either being a hindrance or positive influence in the growth of the business. Although the individual's ability to succeed in business has been associated with the inclination toward 'internal locus of control'[44] – wanting to retain power and independence because of the desire to control one's own environment and destiny as opposed to an 'external locus of control' when there is a belief that one has little control over events or indeed one's own destiny – there are a number of conflicts that may occur within the stages as described through the small business text. The entrepreneur must modify his/her behavioral approach to become more of a resource manager through delegation, team building, networking and

[43] Including Flamhotz (1986).
[44] Locus of control as defined by Rotter (1966) and identified as being 'higher' for owner managers than the population average.

professionalism, as well as the organisation itself becoming more functionally managed with increasing responsibility devolved in areas of finance and quality assurance.

Organisational development therefore, depends on many factors, which influence the propensity for growth, such as personal objectives of the owner manager (often seen to be influenced by family); his/her 'professionalism' combined with a leadership ability to become an effective manager; the capability of the business to become more functionally managed; and the importance of transferable experiences (education, skills, knowledge, personal capital and networks) of which external networks may play a part in securing external resources for sustained growth.

In respect of the 'quasi market' in which Research Centres operate, these organisational development issues remain broadly relevant apart from the personal investment of capital which one could argue reduces an individual's desire to succeed but on the other hand might also increase the tendency to undertake risk. Additionally the drivers for directing or empowering people within Research Centres are not as straightforward as they might at first appear. The traditional business methods of reimbursement and job instability are not so readily employed to orchestrate change when dealing with employees with permanent employment status if, as is likely, they are part of a rigid pay scale structure applied within the whole HEI[45].

Furthermore, academics and researchers often have a more vocationally orientated loyalty toward their subject discipline as opposed to being professionally or corporately minded. Factors such as these, can significantly limit the effects that a Research Centre's founder can have on others who work for him/her (Kerr and Jermier, 1978). Here, the host's organisational context will be of influence in enabling the leadership to exert his/her control by reducing organisational constraints and enabling its sub units to operate with some autonomy (Birnbaum, 1988).

[45] The exception to this are fixed term Contract Researcher Staff as discussed earlier in Section 2.6. However, this situation is changing with recent employment legislation which requires employers to demonstrate that alternative employment, to that currently being undertaken, is not available within the organisation.

The Research Centre founder – who may have a high locus of control at the set up phase – may therefore need to be less domineering to engender the required level of motivation, participation and achievement of his/her team, whilst having a professional management style and strong local networks within the institution to maintain his/her authority.

### 2.8.3 Business management

> *'The growth of the firm can be also seen in terms of its performance in the marketplace and in particular its financial performance and its ability to operate at maximum efficiency levels.'*
> (Gibb and Davies, 1990, p.22)

Business management factors are often characterised by the ability of the enterprise to plan development both at an organisational and strategic level in order to maximise market opportunity through product development. Intrinsic to this area is the notion that the entrepreneur, as a rational decision maker, who is able to understand the market in which the enterprise operates, will be able to improve its competitive position. Hence, growth can be achieved by using the management tools such as a business plan to set targets for new product development and overarching goals for the business. This pseudo-scientific (Gibb and Davies, 1990) approach to planning is often built upon the business development model identified by Ansoff (1965) by exploring development through market penetration; product development; market development and diversification.

However, the link between strategic awareness, orientation and planning in the small business during growth, is often difficult to unpack in the management text due to the lack of 'formal' as opposed to 'informal' planning procedures evident within the businesses studied.

> *'Small firm owners/managers do not engage in systematic planning….Planning is often done on an ad hoc basis only as a mental activity, informal, sporadic and closed often relying on advice from random acquaintances'*
> (Robinson, 1982, p.80)

Many researchers have therefore centered on the planning activities of the entrepreneur and small firm growth or non-growth and found that several factors could be of influence (for example, Perren, 1996a and 1999; Siegel *et al.*, 1993; Storey *et al.*, 1989). Firstly, the owner manager being willing to share equity in return for external investment. Secondly, the strategic awareness of 'market positioning', often specifically targeting 'niche' markets as

opposed to the general sector in which the enterprise operates. Thirdly, new product development and lastly the willingness to recruit and delegate to new managers.

Largely these issues relate to the development of the Research Centre. The ability to target specific 'niche' markets and develop new products in order to capitalise on emergent opportunities with industry or research councils remains a similar analogy. It can be argued that equity must also be shared in order to grow, whether this is through resource acquisition within the HEI, or through external research funding which itself entails formal procedures and regulations to be met over the project period. Furthermore, a Research Centre can be said to benefit from overall financial accounting within the HEI and jointly agreed credit limits on centrally administered budget lines, even if procedures and mechanisms to monitor cash flow are administered locally.

### 2.8.4 Sectoral issues

As has been pointed out above there are distinct differences between the small business sector and the context in which Research Centres operate (Birnbaum, 1988; Shapiro, 1973; Drucker, 1985 and 1990). In the management text on small business growth, these are also constricting factors that are placed upon the enterprise by the sector in which it operates, such as the competition for labour, keeping abreast of technology and bureaucratic constraints in terms of taxation, regulations and labour relations.

Additionally, all business sectors will be effected by the state of the economy and prevailing societal issues, depending upon the extent to which their products and services are affected by changes in consumer attitudes and perceptions. In the same way Higher Education is now at the heart of the 'learning society' (Dearing 1997) and heralded by the Government as the key toward a highly skilled and flexible workforce for UK PLC.

HEIs have within this new social context of accessibility of education and opportunity for all, become part of a growing business sector which is operating in a 'quasi-market' as described above. In this respect, Research Centres – particularly in the subject area of Art and Design where research funding increased annually between the 1992 and 1996 RAE exercise – have had the opportunity to succeed in a fast growing product/market sector due to less intense rivalry and competition than might be the case within more mature and long established markets (Hendersen *et al*., 1980; and Porter, 1980). Yet, as with the business sector, Research Centres need to operate against competitive dynamics in order to grow by seeking market 'niches' (through research specialism) and maximising organisational efficiency in meeting

clients needs (in response to the demands of research councils, industry or commerce). Therefore the issues that arise from the management text on sectoral issues affecting the small business are also relevant to the set-up and development of the Research Centre but are more likely to have a greater direct influence on the operational and business management factors.

### 2.8.5 Relevance of the small business text

To conclude this section, there is considerable value in exploring the 'normative' value of these factors derived from the knowledge of small business and the extent to which these values have transferability to the interpretation of Research Centres. Merton, the social scientist, has been described by some as the founding father of the sociology of science and is widely regarded as having devised the original paradigm that enabled a legitimate means of exploring knowledge that has been moulded by man's experiences. In his paper 'Normative Structure of Science' (1942) he sets out the normative constructs that had previously surrounded the institution of science. This had created an impasse in establishing knowledge in societal problems due to the prevailing scientific values and ethos identified by institutional imperatives such as universality, communism, disinterestedness and organised scepticism. His paradigm, which brought about the concept of variable relationships with the normative structure encompassed within existing domains of scientific knowledge enabled deviance from the previous research regime. Merton's theory is therefore used as the basis for deriving the table below; to identify a variable relationship and transferability of factors from the domain of social science theory covering small business growth to that of Research Centres [46].

[46] Gummerson's theory of diminishing returns was employed using two literary reviews of factors by Gaskill *et al*. (1993) and Gibb and Davies (1990) as the basis for consideration of additional factors until the pattern of return indicated that a reasonable comprehensive list of factors had been achieved.

| *Theme* | *'High' transferability* | *'Low' transferability* | *Comments* |
|---|---|---|---|
| ***Entrepreneurial personality*** | Innovator/initiator, planner/organiser, able to learn from mistakes, ability to cope with personal problems, desire to succeed, strategic vision and awareness. | Risk taker and ability to deal with uncertainty. | Entrepreneurship as behavioral state rather than classification of individual. Risk not based on personal capital but professional standing. Personal objectives less likely to rely on high locus of control. |
| ***Organisational development*** | Business plan, capitalisation or staying power, resource constraints, overhead costs (wages, rent, etc), speed/nature of business growth, external networks, key personnel, large company partnerships/dependency. | Advertising promotional strategy, pricing strategy, family/friends investment stakeholders. | Large company dependency is relevant as analogy of RC's potential reliance on HEI stakeholder provision of equity/resources. |
| ***Business management*** | Financial systems/information, management experience and training, educational/technical background of owner manager, building marketing into quality, design and development, time for planning. | Use of outside advice, inventory difficulties, cash flow control, fraud/disaster, payment by large firms. | The shift from 'ad hoc' to strategic and systemised planning is just as relevant to RC growth. RCs benefit from overall financial accounting within the HEI and 'overdraft' type facilities. |
| ***Sectoral Issues*** | Specified target market, demand for products/services, regulatory controls, competition for staff, fixed assets. | Business location, taxes, sales levels, interest rates, ability to publish, economic conditions. | Higher evidence of regulatory controls and governance in RCs and exposure to government intervention. |

Table 2.8.5.1 Relevance of factors derived from small business growth

## 2.9 Conclusion

It is clear that the scarcity of literature covering the specific development of Research Centres, provides limited opportunity for developing a *framework* to analyse the set-up and development of these 'enterprising' initiatives operating within HEIs.

It has to be said that there is a great deal of debate over the notion of 'public sector entrepreneurship theory' as described by Boyett and Finlay (1994) and a lot of argument from commentators such as Trow (1994) and Fielden (1991) as to its merits. These discussions however, do not dispute that a business like enterprise culture now exists within the HE sector – albeit in a 'governed' form, that is New Public Management. This is also borne out through the lack of any 'non' transferable factors from the literature review of small business growth highlighted in Figure 2.8.5.1.

So if we are to investigate the set-up and development of a Research Centre from within – enabling examination of decision making processes, developmental characteristics, the interaction with stakeholders and its external market-place environment – it follows that the management text on small business growth yields the best basis upon which to understand the particular phenomena in operation. This assumption is however qualified in three distinct ways.

Firstly, the interpretation of entrepreneurial behavior within a Research Centre whilst being highly relevant, may be a migratory state during start-up when placed in the overall context of HE. Hence, as proposed by Gartner (1989), the recognition of entrepreneurial characteristics may form part of a behavioral state as opposed to any classification of any individual.

Secondly, we have also seen that small businesses and Research Centres undergo early phases of growth and are subject to similar external and internal forces impinging upon them. But the extent to which they are able to maintain growth or remain competitive requires the Research Centre not only to adapt and respond to the external environment (clients) but also to its stakeholders (funders) in order for this to be sustained. This is as much to do with the synergy of priorities the Research Centre shares with its host HEI in order to maintain access to the larger resource base as it is to do with being market sensitive in order to take advantage of opportunities as they arise.

Lastly, it also has to be borne in mind that Research Centres, whilst operating as individual operating units within HEIs, are ultimately subject to the same sectoral 'governance' issues that are part of the larger 'quasi' market of Higher Education. This area of the business text

demonstrates the highest degree of divergence from the normative knowledge (Merton, 1942) of social scientific management theory.

Therefore, the *framework* of factors below is based upon the management text relating to small business growth but with additional factors being drawn from research institute management, stakeholder management and academic management. This provides a clear interpretative *framework* to aid the process of data collection, whilst retaining a flexible approach, to ensure specific peculiarities relative to the Higher Education operating environment can emerge.

| ***Classification*** | ***Area of investigation*** | ***Theme*** | ***Factors*** | ***Comments/ references*** |
|---|---|---|---|---|
| ***Internal*** | A. Leadership | Entrepreneurial/ intrapreneurial personalities | 1. Innovator/initiator<br>2. Strategic vision<br>3. Desire to succeed<br>4. Risk taker / uncertainty bearer | RC initiator might be intrapreneur i.e. senior manager in addition to RC Director. Gaskill *et al.* (1993), Gibb and Davies (1990) |
| | B. Business management | Business strategy | 5. Business plan<br>6. Synergy with HEI research policy<br>7. Time for planning<br>8. Outside advice | Gaskill *et al.* (1993), Gibb and Davies (1990), Zaidman (1997) |
| | | Financial management | 9. Financial systems/information<br>10. Cash flow control<br>11. Project management<br>12. Pricing policy | RC's have overall financial accounting systems through HEI. Arnold *et al.* (1998), Gaskill *et al.* (1993), Gibb and Davies (1990) |
| | | Personnel management | 13. Management experience<br>14. Training and development<br>15. Attracting/motivating staff<br>16. Industry experience | Arnold *et al.* (1998), Gaskill *et al.* (1993), Gibb and Davies (1990) |
| | | Technical competence, and communications | 17. Educational/technical background<br>18. Quality control procedures<br>19. Information sharing<br>20. Communication systems | Albrighton and Thomas (1996), Cave *et al.* (1997), Gaskill *et al.* (1993), Gibb and Davies (1990) |

| | | | | | |
|---|---|---|---|---|---|
| ***Negotiated*** | C. | Organisational development | Resources | 21. Capitalization<br>22. Resource access<br>23. Overhead costs<br>24. Investment stakeholders | Gaskill *et al.* (1993), Gibb and Davies (1990) |
| | | | Networks | 25. Policy influence<br>26. Industrial input<br>27. Partnerships/ dependency<br>28. HEI networks | Arnold *et al.* (1998), Gaskill *et al.* (1993), Gibb and Davies (1990), Rowley (1996) |
| | | | Market responsiveness | 29. Marketing plan<br>30. Image and reputation<br>31. Client handling<br>32. Diversification strategies | External image through corporate identity and internal physical environment. Albrighton and Thomas (1996), Arnold *et al.* (1998), Gaskill *et al.* (1993), Gibb and Davies (1990) |
| ***External*** | D. | Sectoral Issues | Market capacity | 33. Regulatory controls<br>34. Demand for expertise<br>35. Competition for staff<br>36. Ability to publish | RCs affected by HEI exposure to government intervention and control. Arnold *et al.* (1998), Gaskill *et al.* (1993), Gibb and Davies (1990). |
| | | | Macro-economic growth | 37. Economic conditions<br>38. Societal issues<br>39. Industrial development<br>40. Public funding strategy | Arnold *et al.* (1998), Gaskill *et al.* (1993), Gibb and Davies (1990) |

Table 2.9.1 Framework to interpret the set-up and development of Research Centres

# Chapter 3: Methodology

## 3.1 Introduction

The aim of this chapter is to clarify the research methodology and to qualify the underlying principles, parameters and decisions, which led to a multi-site, multi-method approach (Miles and Huberman, 1994) from which to build theory from case study research (Eisenhardt, 1989). Having established the rationale, the Chapter will pave the way to the research design employed, the selection of the cases and the process of data collection, condensation and analysis. In doing so, the author has sought to present the central arguments that face the case study researcher and indeed, clarify the standpoint of 'this' particular researcher.

## 3.2 The nature of this study

### 3.2.1 Research objectives

Chapter 1 put forward the three objectives of this study, namely: to identify factors that contribute to the set-up and development of Research Centres operating within HEIs; to identify institutional factors which contribute to their success; and to propose a generic model of Art and Design Research Centre development. The objectives are therefore broad, and implicit within them are a whole series of questions to be resolved: how do Research Centres' form, why do they form and who benefits from them, how do they develop, do they flourish in any particular kind of environment and how are the joint interests of the University and the Centre sustained?

Importantly, the 'how' and 'why' words within such questions are critical to any methodological approach, particularly as the literature review in Chapter 2, suggested limited empirical work in the field[47]. Whilst a quick snapshot of 'what' is happening through a postal questionnaire might give an arbitrary measure of factors in play, one could never yield deep and meaningful insight into the perceptions, assumptions and meaning ascribed to them or any cause and effect relationship[48] that might surround them[49]. Aside from the paradigmatic issue of one's own ontological and epistemological stance[50] – an area of philosophical debate that goes far beyond the scope of this thesis – an appropriate research strategy had to be identified.

[47] An initial review of leading educational management journals combined with searches on the BIDS ISI and Ingenta Journals bibliographic databases found limited empirical evidence that shed light on the development of Research Centres within Higher Education. See Chapter 2, for a wider discussion of existing literature drawn from these sources.
[48] The purpose here being to understand how an event, happening or other phenomenon might impact on another in a linear and sequential pattern.
[49] This is not to suggest a simplistic choice between qualitative case study and quantitative questionnaire was made by the author, but as an example, the questionnaire can be said to represent a set of broad research principles in the positivistic tradition which include: independence of the observer of that being observed; hypotheses followed by deduction to either prove or disprove theory (hypothetico-deductive); generalisation of regularities through selected samples of sufficient size, operationalised to enable facts to be measured quantitatively; and lastly to reduce elements to their simplest possible form in order to create fundamental laws (Easterby Smith *et al*., 1991, p.22).
[50] The author's stance is essentially pragmatic and ontologically locates in the 'transcendental realism' camp suggested by Miles and Huberman (1994) whereby, many tools and techniques may be employed to 'transcend' subjective accounts, in order that generalisable theories and principles can be established within a triangulated 'real' world account.

### 3.2.2 Research strategy

Yin (1994) suggests three conditions must be satisfied in undertaking such a task: does the strategy respond to the type of research question posed; to what extent does the researcher have control over actual behavioural events; and does the study focus on contemporary as opposed to historical events? In essence, Yin (ibid) identifies five research strategies available to the social science researcher: experiments, surveys, archival analysis, histories, and case studies. It is arguable whether this list is comprehensive[51], however Figure 3.2.2.1 below provides a useful starting point to clarify an appropriate strategy for this study.

| Strategy | Form of research question | Requires control over behavioural events? | Focuses on contemporary events? |
|---|---|---|---|
| Experiment | How, why | Yes | Yes |
| Survey | Who, what, where, how many, how much | No | Yes |
| Archival analysis | Who, what, where, how many, how much | No | Yes/no |
| History | How, why | No | No |
| Case study | How, why | No | Yes |

Table 3.2.2.1 Context for Research Strategies (Yin, 1994, p.6)

An experiment would not be appropriate for this study for two main reasons: the research field under investigation shows limited signs of existing knowledge and one could not refine, prove or disprove current theory; and furthermore, it is not feasible to control the behaviour or actions of the people concerned. Equally, a survey is unsuitable for the former reason above and similar to archival analysis, in itself would only be appropriate if the research questions had focused upon outcomes such as ‘how many’ or ‘how much’, rather than an ongoing, operational context.

Therefore, an experiment, survey or archival analysis, were not appropriate strategies to pursue which left histories and case study. Both respond to the ‘how’ and ‘why’ questions posed within the objectives, yet histories alone would have difficulty representing the contemporary focus of this study. An exploratory[52] approach had to be adopted, drawing on

[51] Yin’s work has focused around the development and refinement of the case study method (see for example Yin, 1984, 1993 and 1994) and could therefore, be accused of being selective. For example case study is defined as a strategy encompassing many methods when other authors may well have included ethnography, action research and participant enquiry in a list of strategies.
[52] Yin. R. (1994) argues that an 'exploratory' approach is required when the research arena shows characteristics of being underdeveloped and being a relatively new area of knowledge.

'first hand' accounts wherever possible, to understand complex phenomena occurring within real-life situations. As Yin (ibid) summaries:

> *'The case study relies on many of the same techniques as a history, but it adds two sources of evidence not usually included in the historian's repertoire: direct observation and systematic interviewing. Again, although case studies and histories can overlap, case study's unique strength is its ability to deal with a full variety of evidence-documents, artefacts, interviews, and observations - beyond what might be available in the conventional historical study.'*
> (Yin, 1994, p.8)

Data also needed to be collated and interrogated at two levels; within the overarching context of the University and the local level of the Research Centre. Any factors identified would have to be viewed from an organisational, operational and human perspective within these two contextual boundaries. The researcher would have to view at close quarters the relationship between the two, in order to identify the nuances of social phenomena surrounding respondents recollection of events.

The rest of this chapter will therefore argue that the case study approach provides a useful methodological framework for this study, over and above other research strategies identified. Whilst this brings into question the nature, scope and type of case study envisaged – an area of discussion in the forthcoming section – it is nonetheless pertinent to the objectives stated above and acts as a basis from which to yield meaningful data. As Miles and Huberman (1994) point out:

> *'We also tend to be pragmatic…we believe, perhaps less naively than the reader might think at first, that any method that works-that will produce clear, verifiable, credible meanings from a set of qualitative data-is grist for our mill, regardless of its antecedents'*
> (Miles and Huberman, 1994, p.3)

## 3.3 Rationale for using case study method

### 3.3.1 Aspects of the method

Case studies have for a long time been used to provide 'rich' insight into site specific contexts where phenomena can be observed and reported by respondents in their working environment. Yin (1993) defines case study as being appropriate when contemporary phenomena is to be investigated in their real life context; the boundaries of the phenomena and the context are blurred; and multiple sources of evidence are used. Chetty (1996) argues that its main strength is its ability to measure and record behaviour and that multiple sources of data can be brought together to gain as full an insight as possible.

> *'These include documentation, archival records, interviews, direct observation, participant-observation and physical artefacts.'*
> (Chetty, 1996, p.74)

However, often the method has been seen as being 'soft' due to the difficulty of making generalisations from a site-specific context; the massive amount of data that can be created with limited structure to enable the reader to make sense of it; and the common journalistic style of reporting the 'one off' (Yin, 1993). This has led exponents to perceive its value as being under appreciated:

> *'Most people use it as a method of last resort, and even they use it with uneasiness and uncertainty. Despite the availability of key works on how to do case study research'*
> (Yin, 1993, p.40)

Another problem is that case study method is a broad term and encompasses many approaches, some of which cross paradigms. It is a hybrid, even though it inevitably errs on the side of qualitative research, due to the need to understand 'how' and 'why' questions, its strength becomes its weakness in that it can be attacked on ontological grounds because it can accommodate both qualitative and quantitative techniques (Guba and Lincoln, 1989). Yet, more recently, arguments for case study method have demonstrated that the strengths outweigh the weaknesses[53]; particularly in management research where its ability to derive

[53] For example Chetty (1996) provides some recent examples of the technique being employed to explore the development of small and medium sized firms and the advantages it has over surveys which have created a perception of never ending 'over research' in the area.

the transferable and plausible account has been supported by rigorous theoretical frameworks from which to build theory (for example Eisenhardt, 1989; Yin, 1993).

### 3.3.2 Types of case study

The table below seeks to explicate some of the common forms of the method used in social science.

| Type[54] | Description | Methodological Approach | Ontological/ Epistemological Implications | References |
|---|---|---|---|---|
| Exploratory / Intrinsic / Classic Case | Used where there are signs of limited knowledge<br>To 'explore the territory'<br>'What, 'how', 'where', 'when' research questions<br>To gain a better 'deep' understanding<br>Illustrates a particular trait<br>Explore abstract concept or phenomena 'the one off'<br>'How' or 'why' research questions | Develop theory and then test where possible<br>In depth using range of methods and observation over time<br>Empathy essential to building trust with respondents | Subjective<br>Can be ethnographic – transformative and empowering or part of multiple case approach<br>Largely inductive and qualitative<br>Can illustrate existing argument or predisposition – constructivist / ideologist | Yin, R. (1993)<br>Stake, R. (1994)<br>Dyer, G. and Wilkins, A. (1991) |
| Explanatory / Instrumental | Test cause and effect relationship<br>Insight into an issue or refinement of a theory<br>Case chosen as part of larger research interest | Used to test theory<br>Large range of research methods | Hypotheses testing<br>Errs toward deductive<br>Can lead to theory building<br>Objective<br>Realist | Yin, R. (1993)<br>Stake, R. (1994) |

[54] Teaching cases such as those used for medicine or law have been omitted from this list due to their primary purpose being to establish good practice which invariably means that their origination does not become established through rigorous and fair representation of empirical evidence i.e. research.

| | | | | |
|---|---|---|---|---|
| Collective/ Multiple Case | Instrumental study in multiple<br>Cases chosen due to theoretical representation of phenomena, population or general condition | As above and;<br>Allows cross-case comparison<br>Usually between 4 to 10 cases in practice<br>Develop theory<br>Methodological 'framework' essential<br>Can be inductive or deductive<br>Likely to lead to theory building and generalisations | More post positivist than phenomenological<br>Objective<br>Realist | Stake, R. (1994) and Eisenhardt, K. (1989) |
| Common / Features | Focused on site specific instance/s – 'real life'<br>Ability to understand complex interaction of phenomena in play – 'How' and 'why' questions | Multiple sources of evidence are used<br>Boundaries between phenomenon and context appear blurred | Nearly all ontological / epistemological positions are possible | |

Table 3.3.2.1 Different approaches to case study research

As can be seen from the table above, the case study method has many variations and indeed opposing viewpoints. This is exemplified by the debate surrounding the promotion of the exploratory/intrinsic case or classic case, as referred to by Dyer and Wilkins (1991), and the multiple case study approach proposed by Eisenhardt (1989).

> *'the essence of case study research is the careful study of a single case that leads researchers to see new theoretical relationships and to question old ones.'*
> (Dyer and Wilkins, 1991, p.614)

Whilst Dyer and Wilkins believe in the deep understanding of a single rich 'story', Yin (1993) supports the view that case study research can be used to test hypotheses in a deductive manner by deriving a sample of cases that are 'explanatory' in nature. On the other hand, Eisenhardt (1989) sees the method as being more appropriate to build theory in an inductive manner. However, both Yin and Eisenhardt agree that the method is capable of developing generalisations through strict adherence to a methodological framework – *'case studies, like experiments, are generalisable to theoretical propositions'* (Yin, 1984, p.21).

There is also some convergence in classification of case study types by researchers, although the terminology varies. For example, Yin's (ibid) identification of the 'exploratory' and

'explanatory' case study and Stake's (1994) 'intrinsic' and 'instrumental' case study. The exploratory and intrinsic is important when few theories or limited knowledge within the field exists and when one wants to better understand the particular case. Whereas, the explanatory and instrumental case study approach becomes relevant when there is a need to refine existing theory or extend knowledge in alternative settings.

However, whilst Dyer and Wilkins (1991) 'classic case' may appear similar to the exploratory and intrinsic approach in practice, the authors do not concur with Yin (1994) and Eisenhardt's (1989) stance on using multiple case studies – either exploratory/intrinsic or explanatory/instrumental – to build theory. They align themselves more with critical ethnography, whereby a case study is closely understood by regular observation of the 'particularity and singularity of a single site' (Stake, 1994). Here, the researchers adopt a phenomenological[55] approach to understand and gain empathy with the social group in order to transform and empower – from unconsciousness to consciousness – to make greater sense of the world which they inhabit (Guba, 1990). Yin (ibid) and Eisenhardt's (ibid) approach is therefore, far more pragmatic, allowing flexibility to combine qualitative and quantitative techniques, often spanning paradigms in order that research objectives can be met.

> *'Although some believe that these philosophical beliefs are irreconcilable, the counterargument can still be posed-that regardless of whether one favours qualitative or quantitative research, there is a strong and essential common ground between the two.'*
> (Yin, 1994, p.14-15)

The objectives of this research clearly lean toward the multiple case study approach as a practical mechanism to derive theory that might have resonance to the Art and Design sector as a whole. However, if this approach is to be adopted a balance must be struck between depth (the ability to undertake detailed observations and processual techniques[56]) and breadth (the number of cases) due to the limitations of access and time. Furthermore, Miles and Huberman (1994) suggest, multi-site, multi-method studies have become increasingly common but this brings into focus 'a deep, dark question' (ibid, p.2) about the extent to which the researcher seeks to explicate his or her method. The following section will attempt to address this issue.

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[55] Miles and Huberman (1994, p.2) suggest that the phenomenological researcher does not seek to explicate methodological approaches that explicate an unambiguous 'social reality' because it does not exist.

[56] Pettigrew (2000) suggests that processual analysis can be used to investigate the interaction of action and structural change as it happens over time – arguing that social reality is not a steady state that 'occurs' but 'exists'.

## 3.4 The multiple case study approach

### 3.4.1 Eisenhardt's roadmap

The multiple case study approach has been commented upon by many notable researchers. Miles and Huberman (1984 and 1994) have focused on methods to 'bound' the cases selected and techniques to process qualitative data within them. Yin (1984) has focused largely on the design and selection of the case studies – their nature, form and type – within a wider methodological framework from which to derive theory. Glaser and Strauss (1967) detailed a comparative method for developing grounded theory within cases and more recently, Strauss and Corbin (1990) have outlined components of the process to analyse data from contrasting groups.

However, only Chetty (1996) and Eisenhardt (1989) have sought to provide a procedural description of theory building from case study research, drawing upon previous work (including: Miles and Huberman, 1984; Yin, 1984; Glaser and Strauss, 1967). Yet, unlike Eisenhardt (ibid), Chetty's (ibid) detailed description of the method employed in assessing export practice in small and medium sized firms is not so much a framework as a specific methodological strategy for the study itself. Therefore, Eisenhardt's 'roadmap' described in her paper entitled *Building Theories from Case Study Research* provides a useful mechanism from which to construct a multiple case study research design; a framework from which to analyse each case as a separate entity, compare and contrast across case, and yield patterns of phenomena to build theory.

Eisenhardt's eight stage process to derive theory from case study research is used in the diagram below (see Figure 3.4.1.1) as the basis to describe the research design employed within this study, the selection of the cases and the process of data collection, condensation and analysis. It will act as a point of reference for each of the following sections throughout the rest of this chapter.

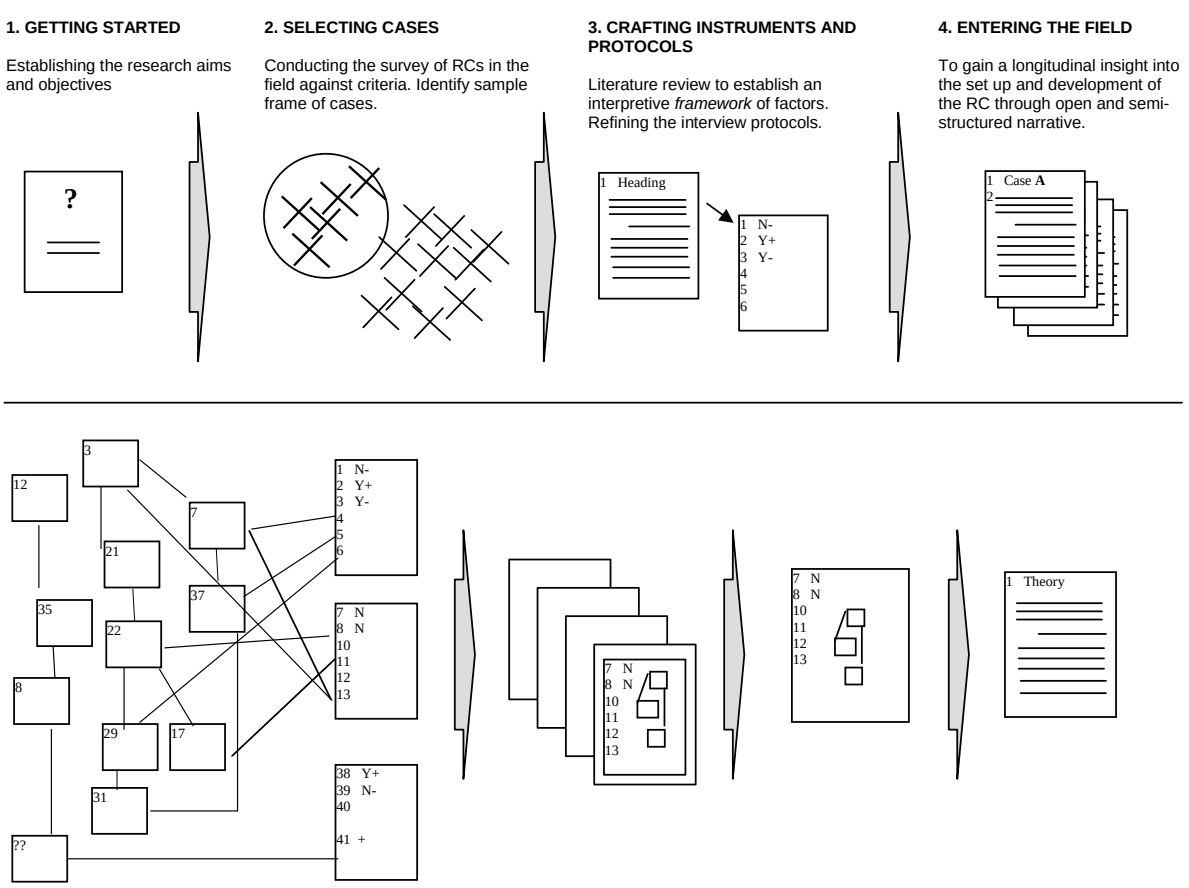


Figure 3.4.1.1 Diagrammatic ‘roadmap’ of the case study process employed

## 3.5 Getting started and selecting cases

### 3.5.1 Sample frame

> *'An initial definition of the research question, in at least broad terms, is important in building theory from case study research'*
> (Eisenhardt, 1989, p.536)

Eisenhardt recognises that there is a need to specify the nature, range, scope and boundaries of the research arena under investigation in order that the researcher does not become overwhelmed by the sheer volume of data. The aims and objectives of this research study have been well detailed above, however, many questions remain about the scope of the study: what constitutes a Research Centre, how many Art and Design Research Centres are there, what might we consider to be a successful case, how many cases should be studied?

Both Yin (1993) and Eisenhardt (ibid) place a great deal of importance on the selection of cases – *'as in hypothesis-testing research'* (Eisenhardt, p.537). The understanding of the population and the relevance to the sample of cases are key to being able to develop theory that might have resonance to the universe as a whole. Wide definitions such as a 'bounded system' (Smith, 1978) are too loose a definition for Yin and Eisenhardt, because they lack clarity and purpose.

> *'the objective must be a 'functioning specific' (such as a person or classroom) but not a generality (such as a policy). This definition is too broad. Every study of entities qualifying as objects (e.g., people, organizations, and countries) would then be a case study, regardless of the methodology used (e.g., psychological experiment, management survey, economic analysis).'*
> (Yin, 1994, p.17)

Thus, a suitable sample frame of cases was required for the process of data collection. To identify the larger sample frame, a web based search for Research Centres operating in Art and Design colleges and departments was undertaken through a systematic investigation of all Higher Education departments that made submissions in the 1996 RAE. 136 Universities and HE Colleges[57] were surveyed – of which 19 did not register as having web pages[58] –

[57] As defined through HEFCE funding of HE teaching and research web page (http://www.hefce.ac.uk/instfund/fecos.htm#m) as of June/July 1997.

consisting of 72 Universities, 16 directly funded Schools of the University of London and 48 Higher Education Colleges. As a first cut, research activity recorded on the web site was interrogated for evidence of Research Centres and/or research groups in order that alternative terminology surrounding the activity could be ameliorated. Twenty-five research entities were recorded representing Art and Design (RAE UOA 64). However, a wide diversity of activity had been classified using the term research 'centre' and 'group'. Two 'centres' were projects solely funded by HEFCE or EU structural funds such as CVE or ESF and as such had a predetermined life span. Four were postgraduate research and teaching 'centres' established with departmental status. Three research 'centres' acted as a physical resource for student study purposes (for example a multimedia Research Centre) and a further two could be termed as 'virtual' research groups of academic staff that would only come together as and when consultancy work came into the University.

### 3.5.2 Definition of a Research Centre

It became clear that a second procedure was required at this point to ensure consistency of filtration: a definition of a Research Centre was required. The Research Strategy and Funding Committee (1996) at Liverpool John Moores University set out in their white paper; 'Academic Policy: Strategy for Teaching Learning and Research[59]', a mechanism for the recognition of research activity through 'centres' of research excellence. This and other studies, which have worked upon a common understanding of what a Research Centre is (Whiston, 1990 and DORCISS, 1995) assume three essential principles: a group of dedicated research staff headed by a senior academic; a national or international standing leading to furtherance of knowledge in the field; and formal recognition by the HEI of the activity. The definition used here then, for a Research Centre within this study is:

> *'a grouping of people, formally recognised by a HEI and headed by a senior academic with the joint intention of creating or furthering a national or international centre of standing in the field of Art and Design research.'*

In light of this definition, the list of Research Centres operating in the field of Art and Design almost halved from the original web survey from 25 research entities to a much smaller sample of 14 Research Centres.

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[58] Interestingly none of the 19 who did not have a web page were Universities but Higher Education Colleges.

[59] Liverpool John Moores University, confers the title of 'centre' through its Research Strategy and Funding Committee which is defined as: 'a grouping of people, formally recognised by a HEI and

### 3.5.3 Identifying ‘successful’ cases

In addition, a third stage evaluation was conducted to begin the process of isolating ‘successful’ cases. To gather more detailed information direct contact with the 14 Research Centres was made. In order that this contact did not interfere with the much more detailed form of investigation to follow or pre-empt any future dialogue between the researcher and the members of staff within the Centre, the Centre administrator was contacted for publicity material on the basis of a general inquiry. The information secured was then tested against performance criteria (see Table 3.5.4.1 below) to ensure that the Research Centre located firmly in the upper end of the spectrum both in terms of performance and longevity. As Eisenhardt reported:

> *‘given the limited number of cases which can be studied, it makes sense to choose cases such as extreme situations and polar types in which the process of interest is ‘transparently observable.’*
>
> (Eisenhardt, 1989, p.537)

It is also worth noting here that the use of the term ‘success’ itself could be considered contentious. Indeed the term will often be subject to different connotations when viewed from a private or public sector perspective. Whilst recognising that ‘success’ could infer comparability with market driven forces and stir arguments surrounding public sector internal markets (Hood, 1995; Fielden, 1991; Prickett, 1992 and 1994 etc.), it represents a clear indication of the study's purpose – to analyse and identify factors which determine a ‘favorable outcome’ in the development of Research Centres.

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headed by a senior academic with the joint intention of creating or furthering a national or international centre of standing in the field.’

### 3.5.4 Performance measures

There is no single, direct, independent verification source for Research Centre performance other than those that apply to a University department as a whole (such as the RAE). This is also recognised by the ESRC (1994) in guide-lines to evaluators when assessing performance of its own Research Centres, with a broad self select menu of Performance Indicators (PIs)[60] including staff, publications, external interrelationships and value for money in respect of the financial resources deployed within the ESRC grant. Whilst these criteria may have served our purpose, a few issues make the ESRC Research Centres different from the Art and Design Research Centres studied. Firstly, ESRC Research Centres receive a grant to set up and develop over a projected period and have a predetermined life span and secondly, specific financial reporting procedures are a condition of the award to identify how the money was spent. In the context of this study, and along with many SME studies[61], the length of Research Centre existence is an important measure of performance for reasons of sustainability and consistency in cross case comparison.

However, unlike the ESRC, the finances of Art and Design Research Centres will vary according to RAE grading, University accounting systems and other income generating activities such as consultancy and as such cannot be taken as a simple measure of performance. Therefore, a set of criteria was utilised that broadly reflected the ESRC PI's but also took into account: the RAE exercise over two submissions[62]; the length of operation; and the number of dedicated research staff – the overall combination of measures making it more likely that the factors identified would be representative of Research Centres operating at the upper end of the research performance spectrum.

[60] The ESRC guide-lines' 'Performance Indicators for ESRC Research Centres' (April 1994) divides general performance indicators into four groups: A) Publications and dissemination; B) External interrelationships; C) Financial resources; and D) Staff resources. ESRC quotes: 'There is some overlap between Groups A and B and performance indicators are allocated to the group that most closely reflects their use by the centres board' (ESRC April 1994, p.5).

[61] Maclaran and McGowan, (1999) suggest criteria for involving companies in the research were that they should have been in business for at least five years, be employing at least five people and be turning over a minimum of £250,000 per annum. The author's argued that these criteria enabled them to research company owners who had experienced some measure of success in developing their enterprises.

[62] It is recognised that the RAE rating itself may not be a true reflection of the RC's publication performance and indeed the minimum level may seem low but this takes into account the relatively new status that Art and Design has through the RAE (Allison, 1994) and the fact that it is the department making a decision on the percentage of research active staff submissions v potential rating of material submitted (see Annex C, HEFCE, 1996. RAE, Notes on Interpretation). However by taking into account the RAE over two submissions alongside the two other measures of performance any adverse RAE reflection on actual RC performance will be ameliorated.

| Criteria | Length of RC existence | Staff | Department RAE (UOA 64) |
|---|---|---|---|
| Measure | > or = 1992 origination to 2000<br>*(covering the last 2 RAE up to the point of data collection)* | > 5 full time<br>*(research staff)* | > or = rating of 2 in 1992<br>> or = rating of 3b in 1996<br>*(research quality that equates to attainable levels of national excellence or better)* |

Table 3.5.4.1 Performance criteria for establishing sample frame

Out of the 14 Research Centres identified, only five centres met the criteria detailed above – all five Research Centres subsequently agreed to participate as case studies.

## 3.6 Crafting instruments and protocols

### 3.6.1 Research techniques

Bryman (1984) draws a distinction between the researcher philosophy, which relates to questions of epistemology, and 'technical' issues which are the consideration of an appropriate research method in relation to another. In this respect, he has much in common with Trow (1957) who advocates that the problem under investigation dictates the methods of investigation. Kane (1985) puts forward a useful analogy:

> *'Research techniques are a bit like fishing flies: you choose the right one for the one you want to catch. No fisherman would use the same kind of fly for twenty different varieties of fish, just because it was the first kind he ever tried or even the one he felt more comfortable with'.*
> (Kane, E. 1985 p.51)

This practical view of selecting research techniques has been adopted here: after an assessment of business research techniques available, two forms of interview have been employed – exploratory and standardised[63] – combined with documentary analysis. The techniques have been selected due to their ability to elicit rich data in response to each of the research objectives.

### 3.6.2 'Life elicitation' and 'standard' interviews

It was essential with the exploratory interview that the development of the Research Centre could be explored in depth, to identify the key events, milestones and the forces at play. Equally, it was important to establish as full as an account as possible in the respondent's own words with minimal researcher intervention. The 'life elicitation' interview technique as described by Plummer (1983) and used by Perren (1996)[64], was employed to give 'voice' to

[63] Oppenheim (1992) describes 'exploratory' interviews as being of free in style and depth. Standardised interviews are based around a predetermined set of questions to form an interview schedule.
[64] Perren's (1996) Ph.D thesis covering the growth of micro-enterprises utilises 'life-elicitation' interviews with the owner manager where the researcher seeks to gain an oral account of the owner-manager's life (the centre's life for this study) with the interviewer taking as passive a role as possible.

each individual actors view of the set-up and development of the Research Centre[65]. As Plummer (1983, p.57) argues: *'views, truths and conceptions of the real can never be wholly ripped away from the people who experience them'.*

A central question was designed to act as a catalyst for the reflection, recollection and dissemination of the interviewees' stories in a rich narrative form and it was essentially simple:

> *'The interview has been arranged to begin to establish the background, context and development of the (Research Centre). In your position as (Research Director/Dean/Head of Faculty) you are in a unique position in respect of being able to describe the creation, evolution and development of the Centre. I would like to go back to your first recollections of how the Centre was conceived and from this point trace through the decisions, milestones and factors, including where possible the achievements, failures, feelings and emotions that have led to the establishment of the Centre as we see it today?'*
> ('Life Elicitation' interview question)

A passive style was key to this research method. The only intervention was when the interviewees began to 'dry up' and took the form of reiterating reported events until a comprehensive account had been achieved. To conclude the interview, interviewees were also asked to summarise their own reaction to the notion of the Research Centre being considered 'successful' and whether they could identify any critical success and/or inhibiting factors (see Appendix A). Thus, an inductive interpretation of success relative to the Research Centre's operating environment could be established along with any further factors which interviewees felt to be significant.

The standard interview protocol utilised the thematic *framework* established in Chapter 3 (see Appendix B). Essentially, a predetermined set of questions was developed from the literature review to elicit management factors that might be apparent in the set-up and development of the Research Centre. The protocol comprises four thematic areas, each with sub sectors: Leadership (Entreprenerial/Intrapreneurial Personalities); Business Management (Business Strategy, Financial Management, Personnel Management, Technical Competence and Communication); Organisational Development (Resources, Networks, Market Responsiveness); and Sectoral Issues (Market Capacity, Macro-Economic Growth). Each sub sector had a set of potential

[65] For example, Blumer (1969) is regarded by Musson (1998) as reviving interest in qualitative techniques in sociology to derive workers accounts of their social interaction in organisational and management research.

factors and its own set of questions with supporting prompts in the event of a 'closed' response. Careful wording of each question within the protocol was critically important to attaining as full and 'open' a response as possible – striking a balance between the need to guide the discussion around topics whilst not wanting to 'phase' respondents with 'management speak' they might not relate to.

For example the factor 'Long-Term Development Plan' (theme 'Business Management', sub section 'Business Strategy'), led to the question: *'Moving on to the future of the Centre, do you have any development plans beyond this year?'*, followed by the prompt: *'What are the key features of these plans?'*, in the event of a non explanatory 'yes'. In total forty questions are within the standard interview protocol, with a further three questions to establish the perceived degree of success, key success factors and key inhibiting factors (as above) reserved for those interviewees not undertaking the life elicitation interview.

Lastly, documentary evidence was accumulated from the sources in the table below in order that the Research Centre could be placed into context, both from a University perspective and a sector perspective.

| Type | Documents | Content | Source |
|---|---|---|---|
| University/ departmental focus | Prospectus<br>Higher Education Profiles | Mission statement<br>Student numbers by subject<br>University research and teaching income<br>Departmental structure<br>Academic scope and boundaries | HEFCE<br>Web-site<br>Direct from University |
| Sector focus | RAE Returns (1992 and 1996)<br>Subject Reviews | Research rating<br>Research active staff<br>Teaching quality rating<br>Academic and research structure | HEFCE<br>QAA |
| Research Centre focus | Publicity material<br>Publication records<br>Press releases | Research Centre mission and philosophy<br>Number and quality of publications<br>Staff and research student numbers<br>Events or changes in policy/strategy during development | Web-site<br>University Prospectus<br>Direct from Research Centre |

Table 3.6.2.1 Forms of documentary evidence and sources

### 3.6.3 Methodological triangulation

In conclusion, this study can claim methodological triangulation, whereby multiple methods and techniques have been employed to investigate the same phenomena. As Hussey and Hussey (1997) point out:

> *'the use of different research approaches, methods and techniques in the same study is know as triangulation and can overcome the potential bias and sterility of a single-method approach'.*
> (Hussey and Hussey, 1997, p.74)

Whilst this approach is not without its problems – Hammersley and Atkinson (1983) argue that yielding more data from different sources does not in itself produce a 'complete' picture – it does nonetheless have a number of benefits in respect of this study.

Firstly, the 'life elicitation' technique is able to yield a full and open account, in the respondents own words with minimal researcher intervention. This combined with respondent triangulation, enables key events to be recorded and a longitudinal account of the centre's origination and development established, from which causal conditions can be mapped. More importantly, the technique allows a deep insight into each respondent's process of reflective sense making. Yin (1984) considers these issues to be at the very heart of the case study method whilst considering its unique contribution to empirical enquiry through an understanding of phenomena, context and events.

Secondly, the standardised interview schedule enables a transferable and 'etic'[66] framework of data collection, which transcends the individual context by drawing on current literature to highlight potential factors[67]. This is particularly important in respect of operational, managerial and structural factors, which might not otherwise emerge from open, exploratory techniques alone. Lastly, documentary analysis provides valuable external evidence of the Research Centre's context, both within the departmental/University environment and within the Art and Design sector as a whole.

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[66] Spradley and McCurdy (1979, p.231) suggests this terminology originates from the words 'phonetic' and 'phonemic': *'Emic descriptions of sound depended on discovering the native categories and perceptions. In the same way, etic descriptions of behaviour, on the other hand, of sound or anything else are based on categories created by the investigator, and are usually employed to compare things cross-culturally.'*

[67] This process is similar to Eisenhardt's (1988) study of strategic decision-making. Constructs were identified, from the literature in the field, which were explicitly measured in research techniques in order to triangulate and ground the emergent theory.

Whilst at a philosophical level, one could argue a sense of tension[68] in the interplay of etic and emic concepts (the factors drawn from the literature and concepts derived from the respondents own accounts) the techniques employed allow for a deep understanding of phenomena which transcends any single subjective account in a pragmatic[69] and useful manner. In addition, the approach is following in a long tradition of combining different methods to achieve as full a picture as possible within case study research[70]. The combination of these two approaches to derive theory is discussed further in Section 8.3 on coding.

[68] Aside from the simplistic notions of the positivist and phenomenologist paradigms (see Easterby-Smith *et al.*, 1991, p.22, for example) other researchers argue that treating social reality as being constructed in different ways in different contexts, may mean that the 'phenomena' reported may not represent the data itself (for example Silverman, 1993, p.156-8).

[69] The author has a great deal of empathy with the pragmatist view. As Firestone (1990, p.105) said: *'The nature of my work puts me squarely on the fence between the postpositivist and constructivist paradigms so some of the decisions I make are more 'kosher' than others to the people on either side. On the other hand, while they are arguing that paradigms cannot be accommodated, I am in fact doing it. That two of the paradigms can be accommodated is demonstrated by the fact I do so.'*

[70] As mentioned previously in this Chapter, there is a high degree of consensus by case study authors (e.g. Eisenhardt, 1989; Yin, 1984; Chetty, 1996) that the ability to combine qualitative and quantitative techniques, archival records and direct and participant observation is one of primary strengths of this method.

## 3.7 Entering the field

### 3.7.1 Respondents interviewed

To allow the research design to elicit data that met the objectives detailed above, attention needed to be paid to three groups of respondents: the centre's founding members; the HEI perspective; and the centre's research staff. Therefore, a founding member of the Centre (in all cases the Research Director), the Senior Manager from the University department (the Dean, Head of Department and Vice Chancellor in the instance of Case C) and a Senior Researcher (nominated by the Research Director on the basis of length of service) were interviewed in each case.

The Research Director and Dean undertook the life elicitation interview. The standardised interview being conducted with the Research Director and Senior Researcher – the interview with the Senior Researcher being broken into two parts: a life elicitation interview and a standardised interview (one immediately following the other).

In summary the interviews conformed to the following research procedure and time schedule as laid out below:

| | Respondents | Method | Objective | Timeframe |
|---|---|---|---|---|
| Initial Contact | RC Administrator/ Secretary<br>Research Director | Telephone interview followed by formal letter of approach[71] outlining the aims and objectives of the study<br>Follow up telephone call to clarify any outstanding issues and identify interview dates[72] | Gain access and identify preliminary documentary evidence<br>Develop empathy with Research Director<br>Establish whether 'case' would meet selection criteria | PHASE 1<br>3rd Qtr 97 |

[71] As a sign of endorsement, the letter of approach was written on behalf of the author by one of the supervisors due to the need to achieve a high response rate from such a small sample frame of cases.
[72] Whilst it was implicit within the aims and objectives set out within the letter of approach, the Research Director wasn't asked whether he would consent to further interviews until the first meeting. Obviously one could argue there are ethical issues involved in such an approach, however it was felt that a degree of trust needed to be built between the Researcher and the Research Director before such a question should or could be asked if commitment was to be forthcoming.

| | | | | |
|---|---|---|---|---|
| 'Life' Elicitation Interview | Research Director<br>Dean<br>Senior Researcher[73] | Protocol derived using Plummer's (1983) approach of an auto-biographical account of the Research Centre's origination, evolution and development<br>Interviewer sets the scene before the RC was established and asks the interviewee to tell the story of its development in their own words<br>Interviewer intervention is minimal – 'can I just take you back', 'you said' – if interviewee 'dries up' before giving a full account | Obtain 'emic' account and 'rich insight' of the set up and development of the RC<br>Identify 'critical' events and the complex phenomena in play surrounding them<br>Make sense of respondents own version of events ('own' world view as seen through their 'story')<br>Establish likely patterns of cause and effect relationships<br>Shed light on the relationship between the RC and the HE through a senior management perspective | PHASE 2<br>Interview with Research Director 1st Qtr 98[74]<br><br>PHASE 3<br>Interview with Dean and Senior Researcher<br>2nd Qtr 99 to 1st Qtr 00 |
| Semi - Structured Interview | Research Director<br>Senior Researcher | Protocol derived through the 'framework' of factors within the literature review<br>Semi-structured questions with supporting 'how' and 'why' prompts (when required) to elicit 'open' responses | Obtain 'etic' account of the nature of the RC as an operating unit within the HEI<br>Identify factors (and new factors) as having a positive, negative or neutral effect on the development of the RC over time<br>Identify whether the respondent believes the RC to have been successful<br>Establish key 'success' factors and key 'inhibiting' factors | PHASE 4<br>2nd Qtr 99 to 1st Qtr 00 |

Table 3.7.1.1 Research process employed

In total five interviews were fully transcribed in each of the five cases. The life elicitation interviews were typically conducted over an hour to hour and a half, whilst the standardised interview ranged between one and a half hours to two and a half hours. More than a hundred thousand words were committed to tape for analysis in this way.

[73] The Life Elicitation interview with the Senior Researcher was conducted at the commencement of the Standardised Interview to minimise disruption and accessibility to staff.
[74] Timeframe differed slightly for Life Elicitation interview with the Research Director in Case E due to logistics of access.

In all cases, the life elicitation interview with the Research Centre's Director was the first intervention to establish empathy and understanding before the commencement of the standard interviews. It was also felt that the technique itself – enabling the rendition of events as the Research Director saw them – provided the foundation for a degree of trust between interviewee and interviewer in a non-threatening environment. This was to prove invaluable as the Research Centre Director became a key figure in terms of access to research staff and senior management during phase 3 and 4 of the data collection process.

A second visit was carried out to conduct the phase 4 interviews[75] with the Senior Researcher and the Dean. The timing between visits was purposefully elongated and ranged from twelve months to eighteen months. Firstly, it was felt that to an extent, interventions at differing timeframes could capture changes in environment, structure, management processes or procedures over the intervening period, and secondly, that this would ameliorate any potential bias from a single respondent due to temporal issues (whether organisational or personal) that might not have been apparent to the researcher[76].

During each visit, field notes were taken to record the Research Centre's physical environment, its general location, visibility (particularly its sense of internal and external signposting for visitors), and any further insights that might have had significance for further analysis – on several occasions quite personal information was forthcoming after the tape recorder was packed away!

In addition, initial conclusions were noted on the interview protocols themselves (see design of interview protocols, Appendix A and B) to act as prompts for the analysis following transcription. As Eisenhardt (1989) suggests:

> *'Overlapping data analysis with data collection not only gives the researcher a head start in analysis but, more importantly, allows researchers to take advantage of flexible data collection.'*
> (Eisenhardt, 1989, p.539)

[75] Except for Case E, due to the logistics of access, only one visit was possible to conduct all the interviews.
[76] In hindsight this was beneficial in the case of the former point but not the latter. Indeed, personal bias did not appear to be an issue and a relatively objective account was even received by an interviewee who had handed in his notice two days prior. However, the duration between the two visits did cause some practical issues in terms of contact - one Research Director left to take up a post at another Research Centre and appeared to 'vanish' for a two-month period.

## 3.8 Analysing the data

### 3.8.1 Difficulties of qualitative data analysis

As recognised by Eisenhardt (1989) and Miles and Huberman (1984) there is a risk that within the case study approach there can become a divide between the actual data obtained and the conclusions derived. The huge amount of data accumulated within the method can mean a lack of clarity within the filtration procedure and a lack of consistency in the process of condensation.

> *'Analyzing data is the heart of building theory from case studies, but it is the most difficult and least codified part of the process. Since published studies generally describe research sites and data collection methods, but give little space to discussion of analysis, a huge chasm often separates data from conclusion.'*
> (Eisenhardt, 1989, p.539)

### 3.8.2 Coding procedure

A process of coding was undertaken to develop 'nodes' by highlighting each element of text that had meaning for the respondent. For example: 'we realised that we needed to have a space of our own' might have been coded as 'identity'. Here, Strauss and Corbin's (1990) well detailed method of building substantive and formal theory from qualitative data was employed, whereby open coding was used to label discrete events or phenomena, and categories identified to group concepts identified through phenomena pertaining to common themes. When all the text had been coded in each of the transcripts – in 'open' and 'categorised' form – patterns of cause and effect where examined across the three life elicitation narratives to determine 'umbrella' nodes: representative of critical events in the centres set-up and development. Likewise, factors that appeared evident in the standardised interview transcripts – derived using the *framework* of factors – were classified as having a negative, positive or neutral effect on the centres evolution.

The open data (rich story telling) providing insight into the interrelationship of critical events – essentially causal connections[77] – that have an impact upon the Research Centre's

[77] Miles and Huberman (1994, p.222) describe a causal model as 'a network of variables with causal connections among them, drawn from multiple-case analyses. Although empirically grounded, it is essentially a higher order effort to derive a testable set of propositions about the complete network of variables and interrelationships. The principle is one of theory building.'

development over time and the structured data (thematic question and response), shedding light upon the management procedures, processes and structures in play. To use an analogy, a football player may have scored numerous goals with his left foot (observed phenomena). The left foot might become identified with his success (a potential cause) and yet this skill may be due to an injury incurred earlier in his career, which meant that the right foot had to be rested (a critical event that led to a negative factor – an injury – becoming a positive factor). Therefore, the approach adopted enables patterns of phenomena to be placed into context over time, which can lead us to envisage both patterns of causality (footballers are likely to have injuries in their careers) and implications for management practice (such as training facilities and planning procedures for injury rehabilitation).

### 3.8.3 Data management

Each interview was taped and fully transcribed before being entered into a qualitative software analysis package (Scholari Nvivo) where the data was numerically ordered. Pseudonyms and codifications were also used for all people and places to protect anonymity.

The use of the software enabled multiple coding of units of text from single words to large portions of documents and facilitated far better recording and retrieval than could have been achieved with simple manual 'highlighting' of transcripts alone. Though, by no means did the software determine the process of data condensation process employed[78], moreover, an iterative and transparent procedure was undertaken between computer and printed text to enable the case as a whole to be seen in its original context. As with Chetty (1996, p.81); *'it was found that manual data analysis gave a better understanding than the computer programme'*. This process enabled patterns of cause and effect relationships to be mentally, as well as visually identified. The software became a vehicle to 'test' emergent hypotheses against different respondent's data sets. As Seale suggests:

> *'Using CAQDAS [Computer-Assisted Analysis of Qualitative Data] is no substitute for thinking hard about the meaning of data. This is often said in response to fears that computer technology will be used uncritically for data analysis. No doubt this fear is partly generated by the perception that just such a process has occurred in statistical research'*
> (Seale, 2000, p.165).

[78] It was recognised early on that the software itself could facilitate quite extensive statistical reporting such as mathematical calculations of the number of coded 'textual' units within 'nodes' but this approach would have not been in accordance with the 'richness' of the data itself or indeed the methodology employed.

### 3.8.4 Audit trail

Huberman and Miles (1994) refer to 'data management' as being an important factor in ensuring 'high quality, accessible data'[79]. The case study chapters employ the referencing system below to provide a clear 'audit trail':

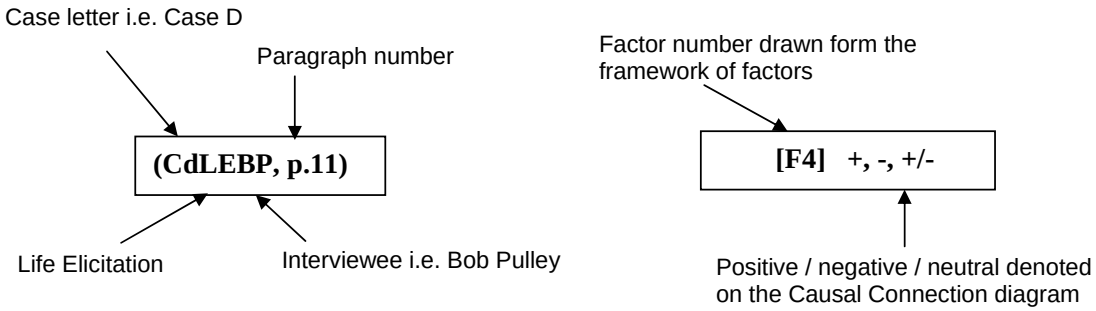


Figure 3.8.4.1 Code to referencing system employed

In addition, the researcher has adopted the model proposed by Kirk and Miller (1986) to highlight emphasis, non-verbal signals and author's comments within the interview transcripts:

| Sign | Convention | Use |
|---|---|---|
| ' ' | quotation marks | verbatim quotes |
| [ ] | parentheses | contextual data or fieldworker's interpretations |
| ... | dotted line | break of sentence then continued |
| ____ | solid line | partitions time |

Table 3.8.4.1 Notations used within the interview transcripts (adapted from Kirk and Miller, 1986, p.57)

[79] Miles and Huberman (1984, 1994) define qualitative data analysis as containing 'three linked sub processes: data reduction, data display, and data conclusion drawing / verification...our aim is to "transcend" these processes by carefully constructing explanations that can account for them in plausible ways.'

## 3.9 Shaping hypotheses

### 3.9.1 The causal connection diagram

The causal connection diagram (as described by Miles and Huberman, 1994, Roworth-Stokes and Perren, 2000a) provides a synthesis of the evidence drawn from each of the five narratives and is employed at the commencement of Chapters 5-9 to communicate the complex interaction of phenomena. It plots the history of the Research Centre from origination and formation to a sustainable position within the University and within wider research community. For example in Case A (Figure 5.1.1.1), the causal connection diagram plots the Centre's evolution from the appointment of a new Head of Department – who used his personal networks to re-locate the emergent research group at Huxley (nodes 1-2) – to a position of international research standing, and key strategic role in the departments research output (nodes 32-33).

Importantly, the diagram encompasses two key components of the analysis: 'factors' drawn from the *framework* derived in Chapter 2 and their positive, negative or neutral effect on the Centre's development (depicted on the left hand timeline in Figure 3.9.2.1 below); and 'nodes' which describe patterns of phenomena drawn from the respondents accounts (numbered boxes throughout the centre of the diagram). Together they provide an insight into factors pertinent to the Centre's development, and cause and effect relationships that become evident over time. Equally, they provide a rich picture of the complex interaction of events, incidents, and happenings[80] against the backdrop of operational processes and procedures in a logical and visually coherent way. For example, node (15) shows the award of research studentships from the Research Councils, leading to a transition from University regulatory controls acting as an inhibiting factor in the Centre's development [F33-], to dedicated information systems – required as a condition of funding – which later becomes an enabling factor [F33+].

> *'such a chain [of causal connections] helps analysts lay out explicitly what may be causing certain phenomena. Although the chain does represent a simplification, that very simplification carries with it the seeds of a fuller explanation'*
> Miles and Huberman (1994, p.227)

[80] The author draws upon Flanagan's (1954, p.327) definition of an incident as being 'critical' in that it *'must occur in a situation where the purpose or the intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects.'*

### 3.9.2 Empirical discussion

Nodes and factors are numbered throughout each diagram to provide a cross-referencing mechanism during the empirical discussion in each case chapter, maintaining a consistent procedure of data management to ensure the reader retains knowledge of the data trail[81]. However, the boundaries between the development of the Research Centre, drawn from the timeline on the right of the diagram and the development of nodes to explain the patterns of causality in the middle, are intentionally blurred to mirror the dynamic and complex interplay within each unique case.

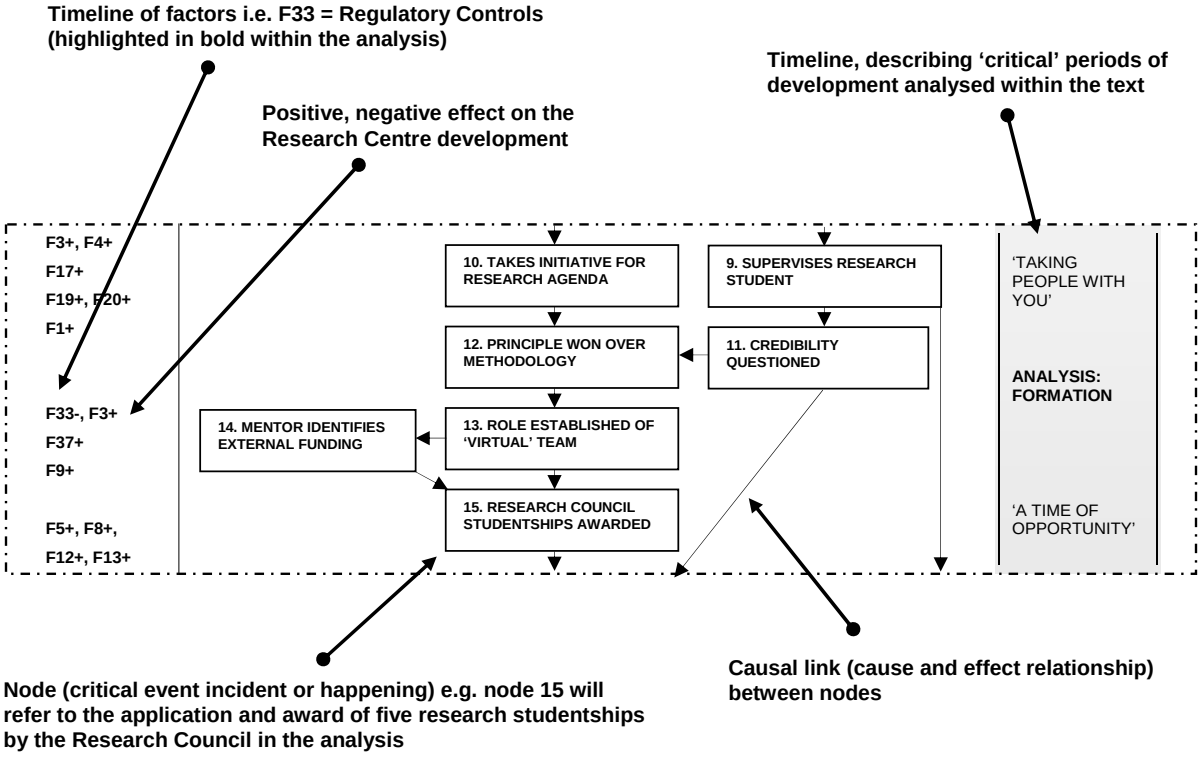


Figure 3.9.2.1 Interpreting the causal connection diagram

[81] In line with Miles and Huberman's (1984) process of data display, reduction and analysis/conclusion.

The right hand column on the diagram also establishes the broad sections of analysis (ORIGINATION, FORMATION and DEVELOPMENT) and their sub-divisions, which are broken down through key emic events reported in the respondents' own words. For example, in Chapter 5 the section on ORIGINATION commences with a sub-section on 'A CONVENIENT STRATEGY' and analyses the HoSs use of networks to re-locate the emerging research group (node 2, 5, 4) together with factors evident during this period: a Research Director with ***management experience*** [F13+]; a known ***demand for expertise*** [F34+] through research and consultancy services; and a plan to improve the University's research profile [F5+/F6+].

### 3.9.3 Axial concepts

Finally, Chapter 10 seeks to establish a third level of abstraction to the coding procedure described in Section 3.8.2; to propose patterns of cause and effect relationships evident cross case. This approach is conducted in accordance with Strauss and Corbin's (1990) method of axial coding:

> *'a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories. This is done by utilizing a coding paradigm involving conditions, context, action/interactional strategies and consequences.'*
> (Strauss and Corbin, 1990, p.96)

As Eisenhardt (1989) recognises, this point marks the period when: *'tentative themes, concepts, and possible relationships between variables begin to emerge'* (p.541).

## 3.10 Enfolding the literature and reaching closure

### 3.10.1 Reaching closure

The cross-case analysis (Chapter 10) makes the leap from substantive concepts proposed in the single case to theory by examining convergent patterns of phenomena in different types of situation (Strauss and Corbin, 1990). This procedure will define the key constructs within Chapters 11 and 12. Here, Eisenhardt's eight stage procedure for deriving theory from case study research reaches its conclusion as comparison is made between existing literature and the hypotheses identified through detailed justification and debate. Thus, closure is reached or as Eisenhardt (1989, p.545) put it: *'the iterative process stops when the incremental improvement to the theory is minimal'*.

### 3.10.2 Issues of validity and reliability

As discussed above, arguably the most contentious part of qualitative data analysis is the process of transition from transcript to categorisation (reduction) and subsequent theory building (analysis), particularly if this is not transparent, consistent and coherent in its rationale. Although it seems foolish to suggest that any process of reduction can ever be a truly objective process – even if highly respected authors in the field of qualitative research would suggest so (see Strauss and Corbin's [1990] claim for reproducibility for instance p.27) – this Chapter has sought to establish a logical and coherent foundation for data collection and analysis. In essence, it has established a theoretical framework through which data can be consistently and systematically collated, codified and analysed in a pragmatic manner.

In addition, a detailed and transparent process of data management has been developed which allows the reader to see the relationship between data, concept development and theory. It is hoped that this goes some way to resolving the *'deep dark question'* surrounding the reliability and validity of qualitative research (Miles and Huberman, 1994). For as Silverman suggests:

> *'Unless you can show your audience the procedures you used to ensure that your methods were reliable and your conclusion valid, there is little point in aiming to conclude a research dissertation...Short of reliable methods and valid conclusions, research descends into a bedlam where the only battles that are won are by those who shout loudest.'*
> (Silverman, 2000, p.175)

# Chapter 4: Introduction to the cases

## 4.1 Introduction

The aim of this Chapter is to set the scene for the case study analysis chapters that follow. Summarised historical and contextual information are provided for each of the five Research Centres, within the backdrop of their department and University environment.

### 4.1.1 Format

It is recognised that an alternative thesis format might locate such background material at the commencement of each of the case study chapters. However, the author takes the view that it is necessary at this stage in the thesis to prepare the reader for the diversity and sectoral significance[82] of the cases selected. Whilst it could be argued that the cross case analysis might be better placed earlier in the thesis, to allow the reader to absorb key issues identified, this approach would run contrary to the logic of the research design illustrated in Figure 3.4.1.1, Chapter 3; to 'build' theory from case study research. Therefore, this chapter will examine each case from the perspective of University context, departmental research co-ordination, physical environment and Research Centre history. The intention is to provide the reader with a 'flavour' of each case and hence aid the process of data analysis in forthcoming chapters.

### 4.1.2 Purpose and approach

As with the debates surrounding thesis format, there is no common consensus between case study researchers on how one should introduce the reader to each 'case'. For example, Perren (1996) employed a 'chronicle' as a condensed summation of the owner managers' narrative – on the development of micro-enterprises – to provide an introduction to each case studied. In contrast, Leadbeater and Goss (1998) provide an authors' account of the significance of each case as an introduction to the concept of civic entrepreneurship with no data trail for the

[82] Due to issues of confidentiality and the ability to refer documents in the public domain back to the specific Research Centre, documentary evidence drawn from the Higher Education Funding Councils, the QAA or the former HEQC, is referenced by year of publication and report type only.

reader[83]. It could be argued that the latter leaves the author open to the accusation of imposing a subjective and journalistic interpretation of events, which may bear little resemblance to the respondents' own recollection of reality. However, unlike Perren, and Leadbeater and Goss, this study does not depend upon a single respondent's account[84] of events and has the benefit of triangulation within three respondents' narratives (Dean, Research Director and Senior Researcher). One approach therefore, would be to create a composite of the three narratives. Yet, no 'summarised' account could ever fully explore issues of convergence and divergence in the rendition of key events by respondents. Indeed, selective judgements over what to leave out and what to leave in would ultimately become a matter of validity (an area discussed more fully in Chapter 3).

At one extreme, 'anecdotalism' (Silverman, 1993) can lead to selective quotes being used to support key concepts even though no attempt has been made to provide a rationale for why such views have been brought forward over others, and why no consistent audit trail of reference has been provided for the audience to assess the proposition for themselves. At the other, long and detailed narratives appear to attribute privileged status to individuals and as such, attempts to ensure 'validation' of the data trail become detrimental to a useful, open and well rounded version of events (Silverman, 2000, p.176-177).

The intention here then, is not to explore issues of causality, sense making or patterns of phenomena that surround key events in the Research Centres' history – this being the specific purpose of the case chapters that follow. Rather, a broad overview is provided that encapsulates evidence drawn from the public domain, the author's own observations during site visits and key events and milestones consistently reported by respondents as having shaped the centre's development.

The reference system and audit trail explained in Chapter 3 are now employed within the research history but quotations themselves have been omitted to reduce any risk of impartiality or over emphasis in such a summarised account – the purpose being to establish an objective and accurate version of key events.

[83] The merits and limitations of this approach are discussed further in Roworth-Stokes (2000c).
[84] Perren (1996) used multiple techniques – life elicitation and a standard interview protocol – to derive a story of the micro-enterprise's development from the owner manager. Leadbeater and Goss (1998) used interviews with the individual's identified as being 'civic entrepreneurs' supported by documentary evidence.

Table 4.1.2.1 below lists the five cases identified through the selection criteria described in Section 3.4. The remaining sections in this chapter will introduce each case to the reader, case by case.

| CASE | Name | Director | Research Centre activity | University | Est. | RAE rating | Staff |
|---|---|---|---|---|---|---|---|
| **A** | **Centre for Design Research** | Jane | Computer Aided Design, New Product Development, Industrial Design | Huxley (technological University) | 1990 | 1992 – 5<br>1996 – 5*<br>(International excellence) | Between 5-10 |
| **B** | **Design Centre for Industry** | Bill | Computer Aided Design, New Product Development, Industrial Design, Interactive Design | Fairfield (large former Polytechnic) | 1989 | 1992 – 4<br>1996 – 3a<br>(National excellence) | Between 5-10 |
| **C** | **Centre for Design Research** | Fred | Computer Aided Design, Digital Imaging, Interactive Design | Middleton (former technological college) | 1992 | 1992 – 2<br>1996 – 3b<br>(National excellence) | Between 10-15 |
| **D** | **Art & Design Research Centre** | Paul | Interactive Design, Research Methodologies, Visual Arts | Bainbridge (small former Polytechnic) | 1992 | 3 – 1992<br>3a – 1996<br>(National excellence) | Between 10-15 |
| **E** | **Art & Design Research Unit** | Martin | Information Design, Interactive Design, Industrial Design, Visual Arts | Claremont (former large Polytechnic) | 1988 | 1992 – 3<br>1996 – 4<br>(International excellence) | Between 10-15 |

Table 4.1.2.1 Case study sample frame

## 4.2 Case A

### 4.2.1 University context

Huxley is a former technological college, which received its University charter in the mid 1960's. It states an approach based upon a joint emphasis of teaching and research and its philosophy is based upon the belief that the latter informs the former (HEQC, Quality Audit Report, 1993, 1994, 1996). In addition, the mission statement highlights a strong sense of community and industry links to inform its academic endeavour (QAA Report, 1999).

The University has gone through a dramatic expansion in student numbers, from 5,758 during the 1992/93 academic year to 12,260 by 1998/9 (HEFCE, HEI Profiles, 1993/1999), largely due to a merger – in the mid 1990s – with a neighbouring institute of higher education. In terms of research income v teaching income, this expansion has led to an increase in HEFCE's teaching budget – almost double in five years (HEFCE, 1994/1999)[85] – and whilst the overall research income has increased, the overall percentage of income from research has reduced – from 15% to 11%[86].

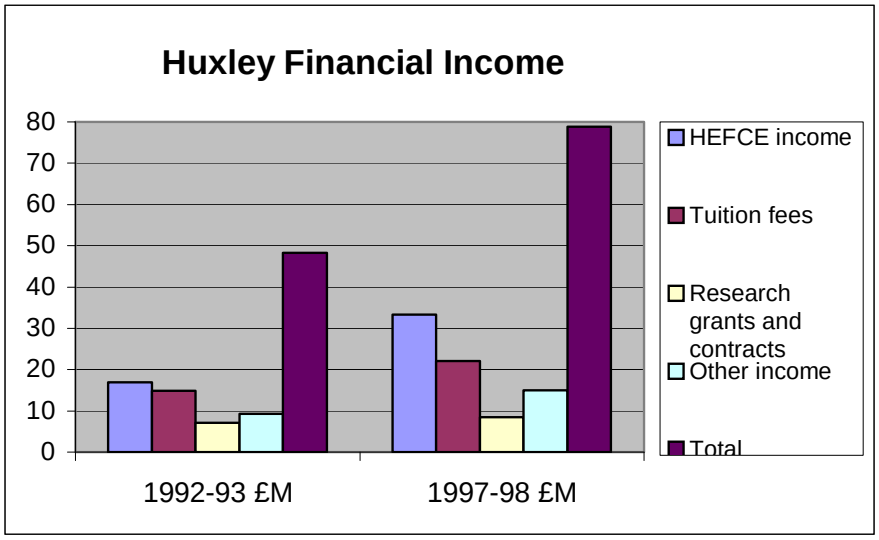


Figure 4.2.1.1 Huxley University research and teaching income 1992/3 and 1997/8

[85] The financial years of 1992-03 and 1997-08 are those nearest to the 1992 and 1996 RAE for which the Funding Councils for England, Scotland and Ireland have published records. The general Retail Prices Index (RPI) has been used to provide parity within these figures. The rate is based on 1987 being the base year @ 100% and therefore published figures for the years covered have been adjusted so that 1992 figure is adjusted by RPI rating of 4.7 and 1997 RPI rating of 2.8.

Huxley is divided into five faculties located over four campuses (ibid). The Centre for Design Research is located on the campus where industrial design resides – in the Faculty of Education and Design – and accommodates a refurbished Victorian single level building (ibid). Visits were conducted by the author in 1998 and 1999 and it retained the same studio based workspace with CAD workstations; a meeting room with rows of shelved project reports and framed photographs of the Centres design work; and a fully equipped model and prototyping workshop. A clear visual identity displaying the Centre's logo was located on the outside of the building, which had its own dedicated car parking spaces off the campus driveway.

The Centre contributed to the Department's RAE submissions in 1992 and 1996, which achieved a standing of international excellence for its research quality on both occasions (HEFCE, 1992b and 1996). Equally, the number of staff submitted as part of the submission was high (nearly a hundred percent of staff being put forward for assessment)[87] both within the University as a whole (68% were submitted in total in 1996) and within the sector – the average being 62% in the 1996 assessment (HEFCE, 1997). In addition, the increase in student numbers and a corresponding increase in staff between the 1992 and 1996 assessment (HEFCE, 1997), saw the number of staff put forward within Art and Design – as a total of all research active staff within the University – also increase from 13% to nearly 19%.

| **Huxley: UOA - Art and Design[88]** | **1992** | **1996** |
|---|---|---|
| Basic Rating | 5 | 5* |
| Proportion of Selected Staff | A 100 - 95% | A 100 - 95% |
| Category A Research Active Staff (FTE[89]) | 13 | 18.9 |

Table 4.2.1.1 Huxley 1992 and 1996 research assessment

[86] The published accounts define 'Research grants and contracts' as those directly funded by HEFCE and/or the Research Councils and therefore many knowledge transfer activities such as ESF, TCS etc. will be included under the broader heading of 'Other income'.
[87] This was in contrast to the overall norm as the average number of declared research active staff fell as the number of individual research outputs required for assessment increased from 2 in the 1992 RAE to 4 in the 1996 RAE (Bainbridge, 1998).
[88] Unit of Assessment for Art and Design as classified under unit 67 in the 1992 assessment and unit 64 in the 1996 assessment which covers the subject disciplines of Design, Fine Art, Electronic arts and Typography & Graphic Communication. Research as defined through the Universities Funding Circular 5/92 (HEFCE, 1992a) as that which: 'includes scholarship, the intervention and generation of ideas, images, performances, and artefacts, including design where these lead to new or substantially improved insights: and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction'
[89] Full Time Equivalents.

The Design Department in the Faculty of Education and Design at Huxley has two Research Centres and three research groups (the later being led by research active staff that also have teaching roles [CaLEPP, p.10]). The Centre for Design Research is therefore, one of five concentrations of research activity co-ordinated through the Dean – each unit operating as a separate cost centre with monthly monitoring procedures for research output and budget income/expenditure (CaLEJTp49). One might describe the structure as being of a devolved and 'Divisionalized' form (Mintzberg, 1988), with competing research divisions directed centrally by the HoD and monitored through the Research Administration Support Office. A diagrammatic overview of the faculty's research co-ordination is proposed below.

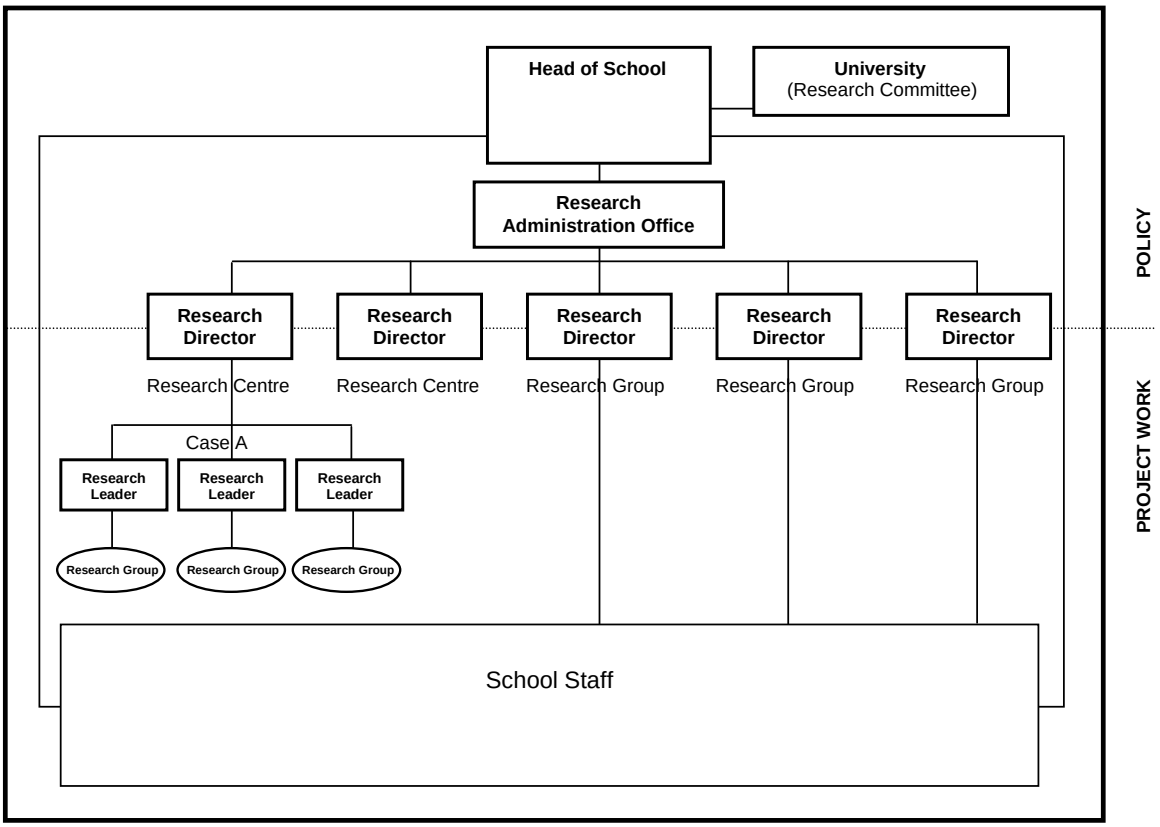


Figure 4.2.1.2 Department co-ordination of research output in Case A

### 4.2.2 Research Centre history

The Centre for Design Research originated from an informal research group consisting of postgraduate students and a member of staff operating at a neighboring University (CaSISF, p.8/CaLEJT, p.10). Led by a postgraduate programme leader, the four students had built up a reputation for consultancy work in design and design management for industry clients (ibid). In 1990, a new Head of Department (HoD) was appointed at Huxley and negotiations undertaken to re-locate the group within the Department of Design (ibid). The Centre for Design Research was created later that year – within a purposefully re-furbished building – with the aim of improving the Department's research profile (CaLEJT, p.10). In its new environment the research group expanded its staff base and broadened its expertise to cover ecological design, medical product development and design management research (CaSISF, p.8/CaLEJT, p.10).

In 1992, the Centre's Research Director – formerly the group's postgraduate programme leader – took up a professorship at another University and a period in charge by another Director led to a change in direction toward the design of animal products (CaLEJT, p.12). By 1995, a review of the Centre's approach to research – part of a wider review of the Department's research policy – brought about a greater emphasis upon 'research through consultancy' in the field of product development (CaLEJT, 12-15/CaLEPP, p.10). The appointment of the current Research Director in 1996 further aligned the Centre strategically within the faculty's research aims; becoming a centre for Teaching Company Schemes within the Department; and providing teaching provision to undergraduate and postgraduate students (CaLEJT, p.14/p49 and CaSIJT, p.107).

In parallel with the development of the Centre for Design Research, a number of new research groups developed in the department during 1992 to 1998 – in total four further centres and groups were established during this period (CaLEPP, p.10). Within these five concentrations of research, the Centre for Design Research has secured a position as one of leading national and international centres for design management research, postgraduate teaching, and research supervision in the field (aiding the department to successive international excellence ratings in the 1992 and 1996 RAE [HEFCE, 1992b/1996]). The Centre's promotional material states that it is a 'research led' design consultancy and it has an extensive client base with major national and international clients. It currently has nine full time research staff – plus an administrator – who undertake a broad range of activities including design management contracts for the research councils, consultancy and Teaching Company Schemes focused on new product development with industry, and management 'best practice' studies for professional design bodies (CaSISF, p.8).

## 4.3 Case B

### 4.3.1 University context

The University of Fairfield – formerly Fairfield Polytechnic – was formed in the late 1960's through the amalgamation of a college of technology, a college of art and industrial design, and a college of business studies (QAA, Subject Review Report, 1999). A separate merger added an education department to the Polytechnic, which achieved University status in 1992 (ibid).

Fairfield is situated in an area of low employment and over the last decade the region has received significant economic investment through the European Union's (EU) Regional Development Programme and European Social Fund (ESF Regional Guidance, 2000). It is designated an area of Objective 1 status, which directs a significantly higher proportion of EU funds toward regional re-generation (ibid).

The mission of the University is broad in its aims and has a strong community focus through a flexible curriculum and the desire for 'excellence' in its teaching and research activities (QAA, Subject Review Report, 1999). Over 14,000 full-time and nearly 10,000 part-time students study at Fairfield, of which just over 1,000 undergraduates and a small group of nearly 20 postgraduates reside in the Faculty of Art and Design; within ten programmes ranging from Fashion to Fine Art (HEFCE, 1999).

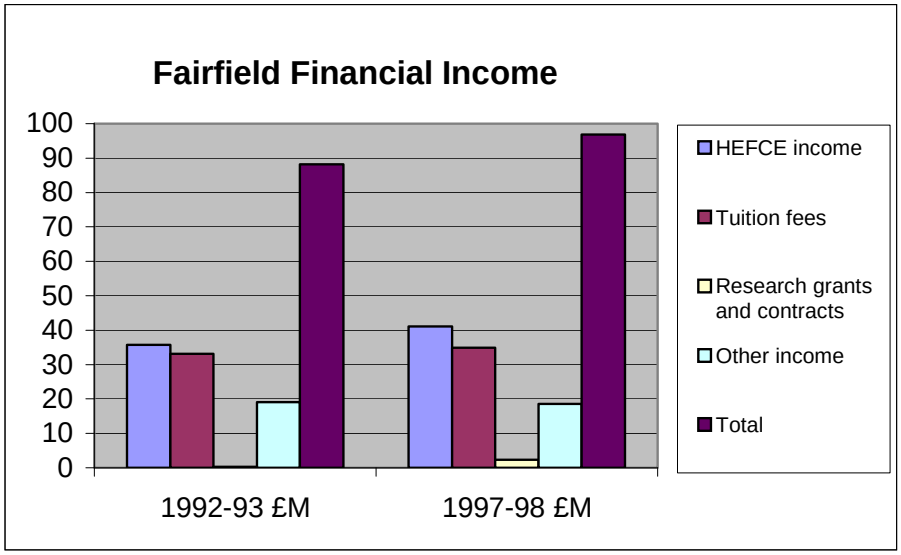


Figure 4.3.1.1 University of Fairfield research and teaching income 1992/3 and 1997/8

Art and Design is one of five faculties, and is located on one of two campus sites in Fairfield (ibid). The Research Centre was visited by the author in 1998 and 1999, at the main Fairfield campus where it was located next to the postgraduate studio – on the ground floor of the Art and Design faculty building in a purposely furnished and secured (accessible by key code) suite of rooms. Specialist resources included: Computer Aided Modelling and Computer Aided Manufacturing equipment; design studio space for up to ten research staff; an area for research degree students; and a meeting/reception area with its own direct access to the city centre. The reception was located adjacent to the faculty's gallery entrance and clearly identifiable with its own visual identity as the Design Centre for Industry. The studio environment was open plan, with researchers, research leaders and the Research Director sharing the same desk/chair/computer format. Although the Centre did not have its own parking provision, easy access was available through the Art and Design faculty's parking area and the train station was only a short walk away through Fairfield city centre.

The Art and Design faculty made submissions to the RAE in 1992 and 1996, achieving national excellence with some evidence of international excellence in the earlier round and national excellence in a substantial majority of areas in the later (HEFCE, 1992b and 1996). Although the basic rating had dropped a point, a substantial increase in the proportion of research active staff had been achieved; increasing from category E (39-20% of staff) to category C (79-60% of staff) in the interim period (HEFCE, 1992b and 1996). A corresponding increase also occurred in the numbers of Art and Design research active staff submitted as a proportion of all University research active staff – from just over 20% to nearly 40%.

| **Fairfield: UOA – Art and Design** | **1992** | **1996** |
|---|---|---|
| Basic Rating | 4 | 3a |
| Proportion of Selected Staff | E 39 - 20% | C 79 - 60% |
| Category A Research Active Staff (FTE) | 20.60% | 38.60% |

Table 4.3.1.1 Fairfield 1992 and 1996 research assessment

The remit of Research Director in Case B includes faculty research co-ordination and extends to managing resources for all concentrations of research activities – groups that have begun to form in adjacent areas to the Centre (CbLEBP, p.38). The structure employed within Case B could be seen as a 'Federal Decentralization', with the Centre acting as an administrational

'hub' for all the individual researchers and research groups so that new Centres can be nurtured in a Divisionalized form (Mintzberg, 1988). Hence, the Research Director is at the centre of research policy on behalf of the faculty and is the conduit for the new research units that emerge from it (CbLEPR, p.9).

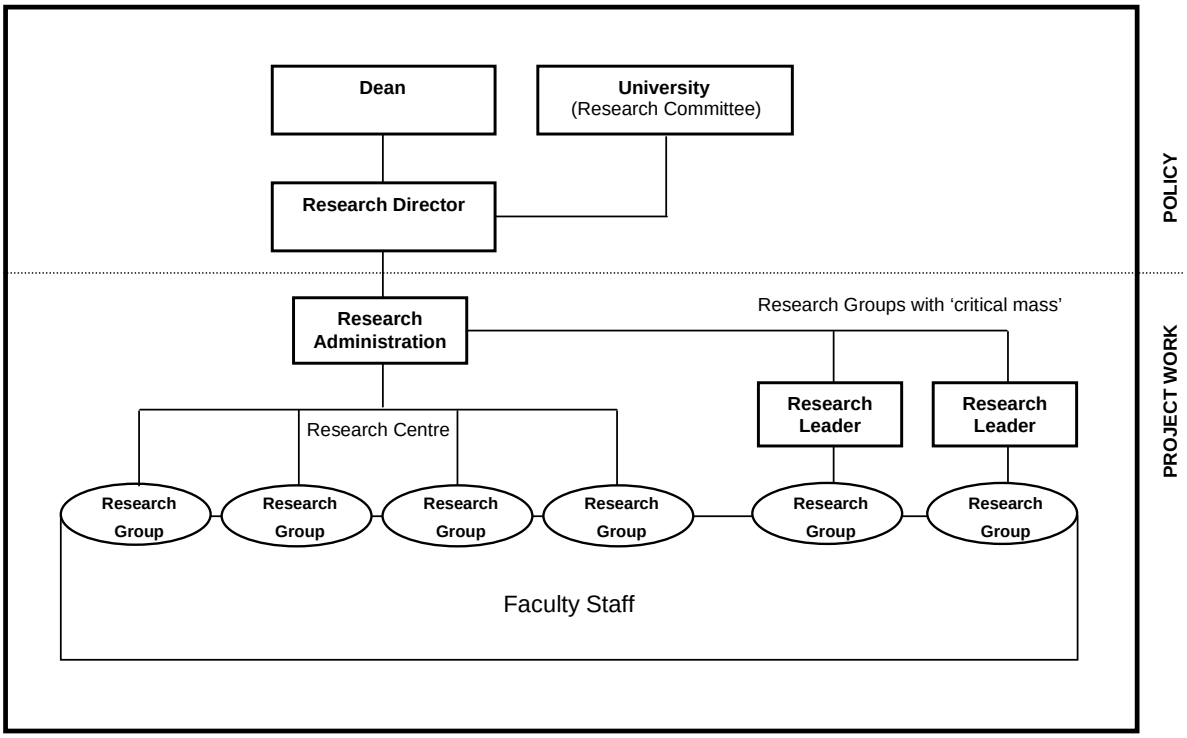


Figure 4.3.1.2 Faculty co-ordination of research output in Case B

### 4.3.2 Research Centre history

In 1989, the Design Centre for Industry evolved from an informal initiative of research and consultancy active staff within the industrial design subject area (CbLEPR, p.9/CbLEB, p.9). The current Research Director, together with two lecturing staff, were involved in externally funded research work with industry (CbLEBP, p.11) and as demand for their expertise grew the Dean was persuaded to create a dedicated environment to facilitate a variety of research projects for multinational medical companies (ibid).

The origination of the Design Centre for Industry was therefore, a spin out directly from teaching, and it has evolved to undertake design research, Computer Aided Modelling and Computer Aided Manufacturing services (CbLEBP, p.38). Specialist teaching at postgraduate

level is provided for students specialising in the area of design management and industrial/product design, whilst research and consultancy work for industry and the research councils forms the majority of the Centre's work (ibid).

During its development, the Design Centre for Industry physically displaced a fashion related research group located in the faculty, which had concluded its research contract during the early 1990's (CbLEBP, p.17). The Centre subsequently helped the faculty achieve a research rating of 4 in the 1992 RAE and a 3a in the 1996 Exercise – the later score reflecting a higher percentage of staff returns (HEFCE, 1992b/1996).

The Centre's publicity materials highlight a 'research led consultancy' focus, and provides evidence of medical product development for large multi-national companies: a product area which has enabled the Centre to combine its research interests with practical product development (CbLEBP, p.29). The Director also sits on a regional committee for medical affairs (CbLEPR, p.9).

The Centre also undertakes design management contracts with small and medium sized enterprises through the European Union's (EU) Regional Development Programme (CbLEBP, p.30) and acts as an 'umbrella' organisation to re-direct research work to a number of research groups inside the faculty (CbLEBP, p.38).

## 4.4 Case C

### 4.4.1 University context

The Art and Design School at Middleton has developed from an initial merger of two local colleges (one art and technology related) in the late 1970's to become a higher education college in the 1980's (QAA, Subject Review Report, 1999). In 1992, the college then merged again with a neighboring college network to form a University under the educational reform act (ibid). The University is organised into eight Schools, located on five main sites in and around Middleton. Over 8,000 full-time students and nearly 4,000 part-time students study at the University with nearly 1,000 situated in the School of Art and Design. Eleven programmes operate through the School, which are located across three sites in the town (HEFCE, 1999).

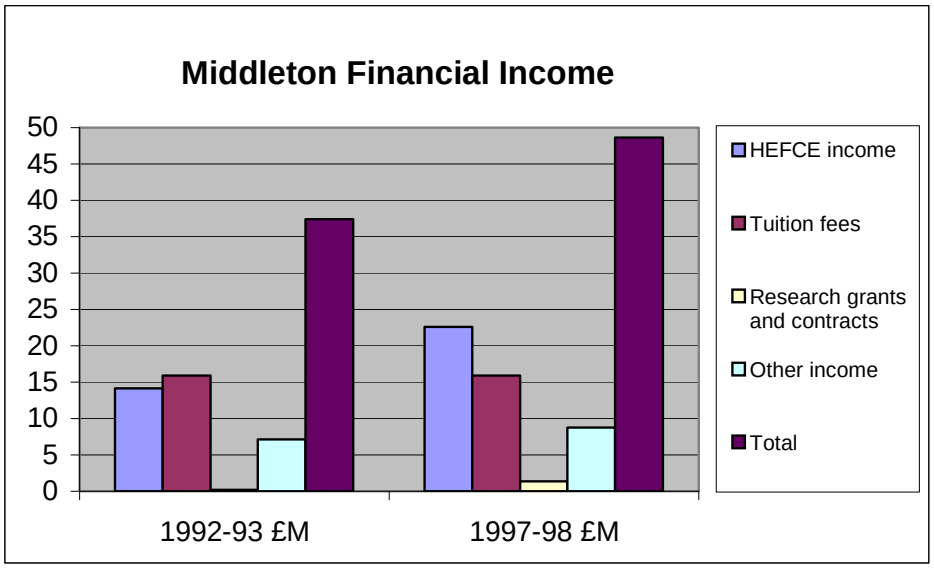


Figure 4.4.1.1 University of Middleton research and teaching income 1992/3 and 1997/8

The Centre for Design Research was visited twice by the author; once in March 1998 and again in April 1999. The location of the Centre had changed during this period and reflected the Centres new status as a Research Institute within the University. Upon the first visit, it was located within the School of Art and Design in the centre of Middleton in a renovated Victorian factory that housed several of the degree and masters programmes. Space was dedicated with approximately a quarter of the second floor set aside for a computer room,

design studio and administration office – the latter adjoining a separate double office occupied by the Research Director and his secretary. The Centre was clearly marked within the building, yet it did not have a separate reception or visual identity externally.

A second visit was conducted after relocation (to interview one of the senior researchers – the Research Director had been appointed to another University and was interviewed there). The Centre occupied a separate site in a purposely refurbished building about a mile away from the School of Art and Design campus with its own car parking and reception. The building clearly directed visitors to the Centre for Design Research. Inside, research leaders inhabited a series of offices with windows overlooking open plan studios, where the majority of research staff were located, each with newly equipped computer workstations. In addition, a main presentation room was located just off the main reception – the room in which the interview was held.

The Centre for Design Research contributed to the Art and Design faculty's submission in the 1992 and 1996 RAE, and the basic quality rating improved from attainable levels of national excellence in 'some' areas (rating of 2) to national excellence in the 'majority' of areas (rating of 3b). However, there was a decrease in the overall proportion of staff who submitted work for the assessment in 1996, even though the percentage of Art and Design research active staff within the University as a whole remained almost the same; the number of staff within the faculty having grown in accordance with a near doubling of student numbers in the faculty during the intervening years (HEFCE, 1997).

| **Middleton: UOA – Art and Design** | **1992** | **1996** |
|---|---|---|
| Basic Rating | 2 | 3b |
| Proportion of Selected Staff | C 79 - 60% | D 59 - 40% |
| Category A Research Active Staff (FTE) | 18.60% | 19% |

Table 4.4.1.1 Middleton 1992and 1996 research assessment

One could describe the structure of the Research Centre in Case C moving toward a Research Institute as one of a 'Professional Bureaucracy' (Mintzberg, 1988). The research 'act' has been standardised through the experience and expertise of the research professionals that binds together the research team. Discretion and autonomy are provided through the Vice Chancellor as the strategic leader to the Research Director because the standard and quality of

the research undertaken is ‘known’ and the imperative is to augment the University’s research output. A diagrammatic overview of the Institute’s research co-ordination between the faculty and the University is put forward below.

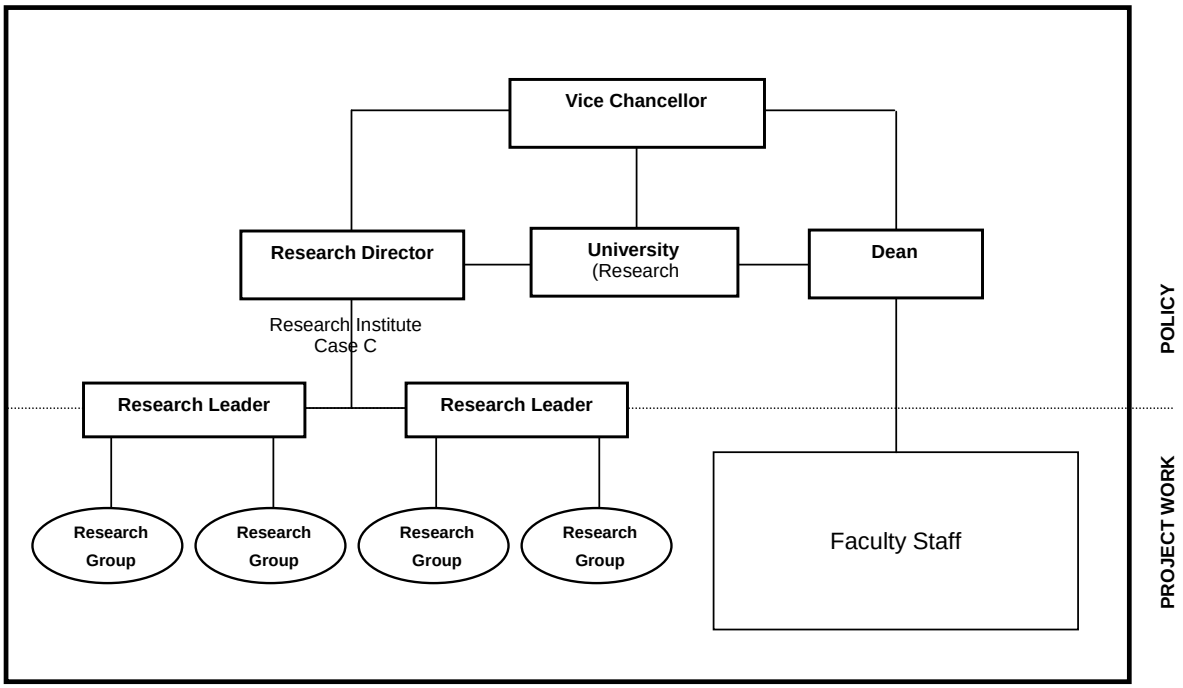


Figure 4.4.1.2 Faculty co-ordination of research output in Case C

### 4.4.2 Research Centre history

In 1992, the Centre for Design Research was established immediately upon the appointment of an Assistant Dean – who also became its Research Director – in the School of Art and Design at Middleton (CcLEPJ, p.12). This new role was created by the former Academic Director to combine the development of Middleton’s research interests and postgraduate programmes in the School (CcLEGS, p.18). Subsequently, the Research Director recruited a number of researchers and research projects from his former University to develop the Centre’s activities (CcLEPJ, p.20).

By 1994, the Centre had diversified its research interests to include colour imaging, with the appointment of a former colleague of the Research Director, and staff numbers grew rapidly as the Centre doubled its original staff base between 1992 and 1996 (CcLEPJ, p.21).

However, a change in the School's research strategy and a review of the Centre's role within it came about with the appointment of a new Dean in the late 1990's (CcLEPJ, p.23). By 1999, the Centre for Design Research had become independent from the School of Art and Design and became a Research Institute under the authority of the Vice Chancellor (CcSHT, p.86).

At the time of data collection, the Centre had grown to a total of eleven full time staff, seven part-time/visiting staff and eighteen research students (promotional material, 2000). It operates as a separate departmental cost centre at Middleton conducting: research contracts; research student supervision; consultancy with industry; and teaching postgraduate students in the field of design, electronic arts and colour research (CcLEPJ, p.24).

## 4.5 Case D

### 4.5.1 University context

The mission statement of Bainbridge highlights its role to engage with practice through research and teaching (QAA, Subject Review Report, 1999). Its students study over 145 full-time, part-time and sandwich courses at undergraduate, post-experience and postgraduate levels (SHEFC, 2000). Although, its overall student numbers are relatively small (just over 8,000 students) it has a history of teaching vocational and professional disciplines with strong links with industry (ibid). These links which have paid significant dividends due to its location in the heart of one of Europe's most significant oil producing regions (ESF Regional Guidance, 2000).

A breakdown of the Bainbridge's research and teaching grants for 1993 and 1996 (SHEFC, 2000) is provided below and highlights the predominance of teaching over research and the relatively small degree of Quality Related research activity overall when compared to HEFCE (1992b/1996) Research Assessment outcomes[90].

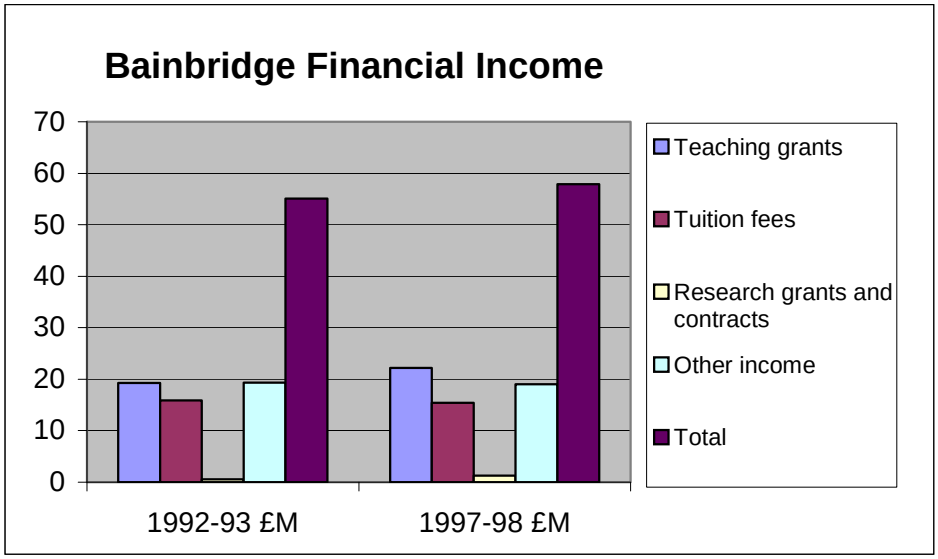


Figure 4.5.1.1 University of Bainbridge research and teaching income 1992/3 and 1997/8

[90] Scottish University Research Assessment Outcomes in 1992 and 1996 where reported through HEFCE circulars.

The Research Centre now accommodates all the School's designated researchers and has consolidated its research resources into one purpose designed building to encourage and facilitate the development of practice-based research (QAA, Subject Review Report, 1999). Visited during 1998 and 1999, the Centre had undertaken a move to a purposely-designed building in the interim. Previously, a space had been sectioned off housing approximately seventeen Research Fellows and Research Students in the heart of the main undergraduate and postgraduate studio spaces, whilst the current location – comprising studio space, exhibition and experimental space, new media PC workstations and a seminar/presentation room – is within a separate annex in the campus grounds. The annex also houses the postgraduate Masters students. The main University campus is in the nearby city centre with the Art and Design School located some five miles away in its own campus set amongst extensive landscaped park land within an area of outstanding natural beauty (ibid).

The Centre for Art and Design co-ordinated the Art and Design School's submission in the 1992 and 1996 RAE, and the basic quality rating remained equivalent – achieving a level of national excellence and international excellence in some sub-areas (new levels of 3a, 3b and 5* where introduced in 1996 and the levels increased from five intervals to seven). However, the School increased the overall proportion of staff who submitted work for the assessment in 1996, from category D (59-40% of staff) to category C (79-60%), and in doing so the proportion of Art and Design research active staff within the University's research staff as a whole, significantly increased from nearly 17% to over 37% (HEFCE, 1997).

| **Bainbridge: UOA – Art and Design** | **1992** | **1996** |
|---|---|---|
| Basic Rating | 3 | 3a |
| Proportion of Selected Staff | D 59 - 40% | C 79 - 60% |
| Category A Research Active Staff (FTE) | 16.80% | 37.30% |

Table 4.5.1.1 Bainbridge 1992 and 1996 research assessment

The structure that has emerged in Case D might be described as a 'simple hierarchy' with the Research Director at the centre of research strategy and research project management. The Director in Case D has co-ordination responsibility for all research undertaken within the School and is the key decision-maker/controller of research resources (CdSIMS, p.171).

This has led to a clearly defined structure to deliver the School's research strategy, which places the Research Centre and its Director, at the heart of staff development (for higher research degrees), new research group formation, quality control and research co-ordination (CdLEPW, p.23). The School now has a diverse range of research interests from fine art, new media and communication, design management and electronic Art, which form 'clusters' of research interest that are co-ordinated, developed and maximised for research output by research leaders (CdSIMS, p.149).

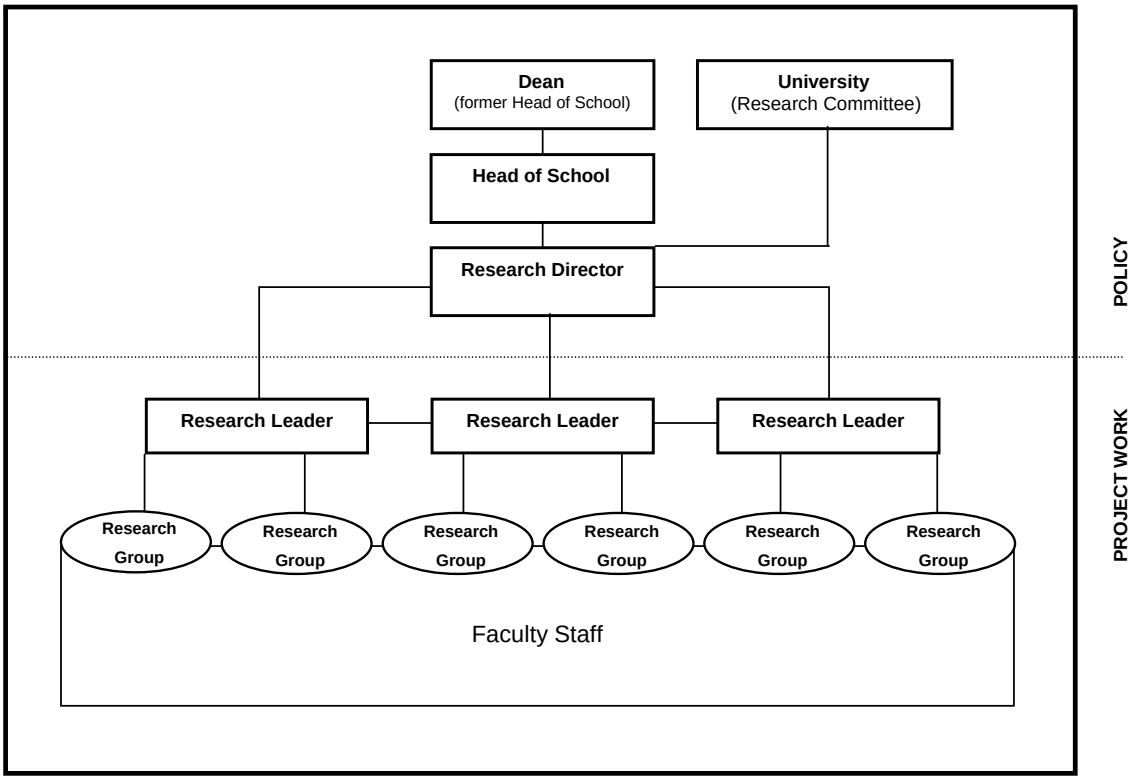


Figure 4.5.1.2 Faculty co-ordination of research output in Case D

### 4.5.2 Research Centre history

In 1988 a new Head of School was appointed to the Art and Design Department at Bainbridge with a remit to develop research activity (CdLEBP, p.9). By 1989, a part-time lecturer had completed a research degree and an opportunity arose to secure a research studentship funded by the University and supervised by the newly qualified member of staff (CdLEBP, p.9).

Subsequent applications were made to the research councils for research studentships and between 1989 and 1994 a further five studentships were supervised by the same member of

staff (CdLEPW, p.13) who was appointed to the position of Reader in 1993 (CdLEPW, p.29, CdSIMS, p.9).

Two Ph.Ds had been completed by 1993 (CdLEPW, p.17) and the research students – who had previously been located across the campus – were physically brought together, and formally recognised by the University as the Art and Design Research Centre (CdLEPW, p.17, CdSIMS, p.9).

In 1991/92 the Reader and the Research Student co-ordinated and prepared a submission for RAE and the department achieved a 3b; the highest score in the University (CdLEPW, 19-21, CdSIMS, p.9, CdLEBP, p.9).

The injection of core funding – in the region of 200k per annum – led to the appointment of a post doctoral Research Fellow and a Public Output Co-ordinator: roles created to aid research output and to develop a publication strategy (CdLEPW, p.23, CdSIMS, p.9).

In the 1996 RAE, the Centre helped the School of Art and Design achieve a national research standing with a 3a rating (HEFCE, 1996). The aims and objectives of the Centre have remained largely unchanged throughout; as a research resource – intellectual and physical – for all staff and postgraduate research students in the School (CdSIPW, p.14). The Research Director represents the faculty on the University Research Committee and the Centre's practice based approach to research methodology has also become adopted by the University as a whole (CdLEPW, p.31/ CdSIMS, p.9).

The Centre employs eleven full time research staff and three associate members (promotional material and publications listings, 2000). Many of the Research Students and the Research Fellows have remained within the Centre to develop their own research interests as research leaders – heading new research clusters in audio visual art, sculpture, art and design research methodologies, interactive design and distance learning methodologies (CdLEBP, p.21/CdSIMS, p.191).

## 4.6 Case E

### 4.6.1 University context

The University of Claremont was formed from a merger of two Higher Education providers in the city of Claremont during the mid 1980's (QAA, Subject Review Report, 2000). There are currently 16,600 full-time equivalent students, located on four campuses across the city (ibid). The region itself has suffered from under investment, dereliction and social problems over many decades but is currently going through a period of some increased economic investment and stability (CeSIDU, p.196; QAA, ibid).

This background to the University's work has however, placed its learning environment in a unique position; being in an area that has seen high unemployment and limited investment in previous years whilst having a higher than average research and teaching budget allocation due to its situation and role within the community (CeSIDU, p.68).

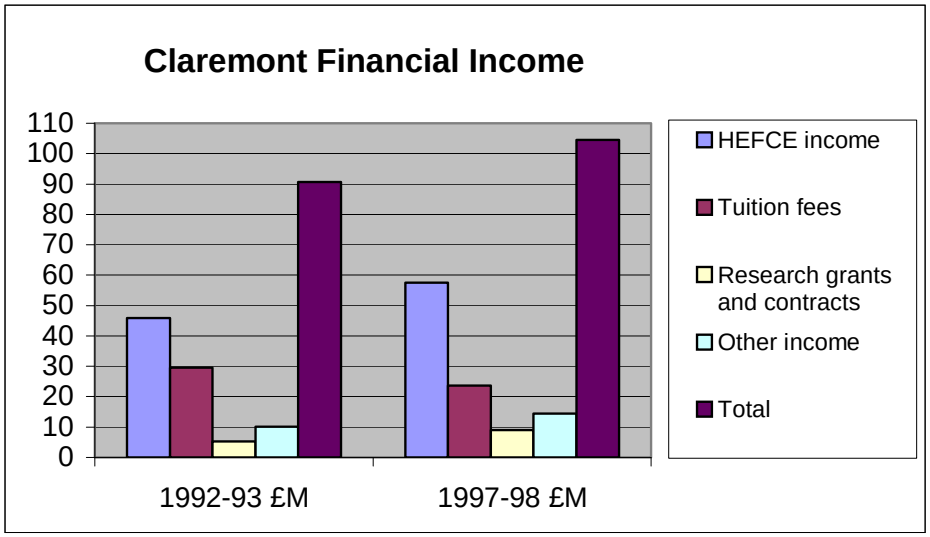


Figure 4.6.1.1 University of Claremont research and teaching income 1992/3 and 1997/8

The Art and Design provision is primarily located on one campus in the centre of Claremont. There are six faculties within the University and the School of Art and Design is one of four Schools in the Faculty of Art, Design and Humanities. Nine hundred students were enrolled on the School's undergraduate programmes in the academic year 1999/00, and a small community of just over fifty postgraduates studied on over fifteen programme routes

(HEFCE, HEI Profiles, 1999). 56 full time equivalent academic staff and 24 technical and administrative staff support the provision (QAA, Subject Review Report, 2000).

The Art and Design School's stated objectives are synonymous with that of the University in the development of the learner as an individual and largely focuses on the University's role within the community, primarily through its teaching along with practical research through sustained personal practice and independent study (ibid).

The Unit was visited by the author during August 1999 and interviews conducted in the Research Director's meeting room on the second floor of the main, 1960's, University building in Claremont city centre. Fifteen (FTE) staff including the Research Co-ordinator and Research Director had research roles defined through their balance of duties in the Art and Design Research Unit (CeSIDU, p.86). However, unlike the former Design Research Centre – the predecessor to the Art and Design Research Unit established in 1989 and re-organised in 1996/7 (CeLEMO, p.12, CeLELP, p.13) – there was no consolidated space for research staff to be located together (author's field notes). Instead, the Research Co-ordinator and researchers were spread amongst general staff offices with standard workspace, personal computer and administrative resources 'pooled' with teaching staff (ibid).

The Art and Design Research Unit and the former Design Research Unit helped co-ordinate the School's submission to the RAE in 1992 and 1996, achieving national excellence in the earlier round and national excellence with some international excellence in the later (HEFCE, 1992b and 1996). Yet, whilst there was a slight improvement in the basic rating, the proportion of research active staff submitted within the unit of assessment had dropped by a category; from 94 – 80% of staff to 79-60%. A corresponding decrease in the proportion of Art and Design research active staff submitted as a proportion of the University as a whole – from nearly 58% to 45% of all research active staff – can also be seen in the table below (HEFCE, 1992b and 1996).

| **Claremont** | **1992** | **1996** |
|---|---:|---:|
| Basic Rating | 3 | 4 |
| Proportion of Selected Staff | B 94 - 80% | C 79 - 60% |
| Category A Research Active Staff (FTE) | 57.50% | 45% |

Table 4.6.1.1 Claremont 1992 and 1996 Research Assessment

Case E demonstrates a structure which Mintzberg (1988) might have described as 'Adhocracy'. The relationship between the design, fine art and electronic media researchers has been informal and liaison mutually constructed within the faculty only when research work coincides (CeLEMO, p.12). The terms of reference (decentralisation) for the research role is negotiated with the Head of School (who acts as the Research Director) and co-ordinated through the Research Co-ordinator. The structure itself is in a state of flux (CeLEMO, p.14/CeSIDU, p.208) and works between an 'Operating Adhocracy' and an 'Administrative Adhocracy' in that the researchers respond directly to the needs of the research councils and the RAE in a self directed and peripatetic manner.

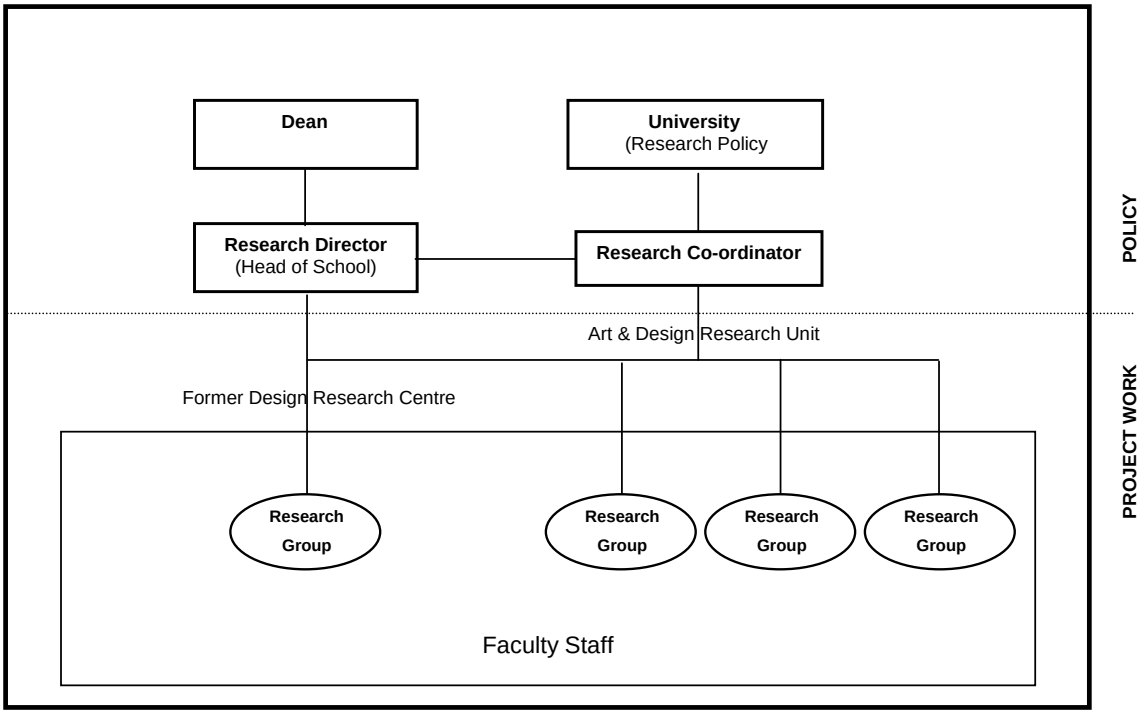


Figure 4.6.1.2 Faculty co-ordination of research output in Case E

### 4.6.2 Research Centre history

The Art and Design Research Unit originated from the former Design Research Centre at Claremont, established in 1989, by an informal group of lecturing staff who sought to practice and promote their work through consultancy with local industry (CeLELP, p.11/CeLEMO, p.9). This approach had been encouraged following the appointment in 1986 of a new Head of Department who sought to develop the department's research profile (CeLELP, p.9). In 1989

the department had put forward the first Art and Design research submission in the sector (CeLEMO, p.12/CeLELP, p.11) – before the discipline became eligible under its own subject classification in 1992 (HEFCE, 1992b) – and helped the faculty achieve a research rating of 3.

By 1990 the Head of Department had been appointed to the position of Dean, and a Research Committee was established together with financial support for Research Studentships (CeLEMO, p.11/CeLELP, p.9).

In parallel with these developments, the originating member of the Design Research Centre had formed a cross-disciplinary team of six design and engineering lecturing staff to undertake industrial design contracts focusing on medical products in partnership with a national research hospital (ibid). The reputation of the staff members grew – one received the award of UK 'Designer of the Year' – and the Centre's Director became Head of School (CeLEMO, p.9-18). In 1990, a Professorial Chair was created in Design which secured medical product research as a central strand of the Centre's work (CeLELP, p.11/ CeLEMO, p.9).

By 1992, the Centre had helped the department achieve a 3 in the RAE (with an increased in staff submissions to 57.5%) and the first Research Studentships were beginning to achieve research degree completions (CeLELP, p.9). However, by the mid 1990's many of the medical product manufacturers had moved production to the Far East and the Centre switched its primary work to other areas including Teaching Company Schemes with regional companies and an increase in research degree registrations (CeLEMO, p.11).

Between 1992 to 1996 the School's research strategy moved away from supporting interdisciplinary activity to focusing purely on Art and Design discipline development (CeLEMO, p.11) and by 1997 the School had become embroiled in a University re-organisation of two faculties (Humanities and Art and Design): the former Schools of Art and Design were amalgamated (CeSIDU, p.23). In 1996, the School achieved a national/international research standing with a rating of 4 in the RAE (HEFCE, 1996/CeLEMO, p.13/CeLELP, p.13).

In 1998, and in compliance with the University's strategy to co-ordinate all areas of research into central Units, the Centre was renamed the Art and Design Research Unit and both a Research Co-ordinator and Publicity Co-ordinator appointed to bring about a consolidation of 'Art' and 'Design' research activity (CeLEMO, p.12/CeSIDU, p.9).

Although the cross-disciplinary nature of the units founding work with other departments no longer remains a priority (CeLELP, p.13), new sub groups have formed within the design, electronic media and fine art researchers in the School. Responsibility is now spread equally between the Research Director and the Research Co-ordinator for the Art and Design School's research policy – the latter has representation on the University's research policy committee (CeSIDU, p.208). The Unit now acts as a central facilitator for research staff, teaching company associates, research students and staff generally within the School who wish to engage in research (CeLEMO, p.14/CeSIDU, p.17).

# Chapter 5: Case A

## 5.1 Summary of the approach

The Head of Department, Research Director and Senior Researcher from the Research Centre in Case A were asked to provide an autobiographical account of the set-up and development of the Centre from conception to current state. In addition, the Research Director and the Researcher were also interviewed using a semi-structured interview protocol derived from the framework of factors (see Chapter 2: Literature Review). Documentary evidence such as publications and funding council circulars, and the direct observations of the author have also been used to triangulate individual interpretation of events.

It is important to note that the format of the thesis is such that each case is analysed independently to try to establish, in so far as possible, an objective and well-rounded account of events in accordance with Eisenhardt's (1989) eight stage process to derive theory from case study research. Therefore, the reader should try to see each new case chapter as an instalment, specific to its own operating context, before the integration of cross case data in Chapter 10.

### 5.1.1 Interpreting the causal connection diagram

Figure 5.1.1.1 below provides a synthesis of the evidence drawn from Case A. It plots the history of the Research Centre from the point of origination when a new Head of Department appointed an 'entrepreneurial' research leader (nodes 1-5), to a position of sustainability (nodes 33-34) with the Research Centre maintaining a diverse range of funding sources and becoming a key component in the department's research output. The boundaries between the development of the Research Centre drawn from the timeline on the left of the diagram (which includes the factors in play as derived from the *framework* of factors) and the development of nodes to explain the patterns of causality on the right, are intentionally blurred to mirror the dynamic and complex interplay within the case.

Each node is numbered to provide a cross-referencing mechanism during the empirical discussion in the rest of the thesis. For example (20) will refer to the node where the most senior researcher is promoted to the position of Research Director with a mandate to integrate the Centre's work in line with the department research strategy. Likewise, the reference codes in the analysis that follows (such as CaLEJT, p.9) refer the reader to the transcript and the paragraph within the interviewee's narrative from which the pattern of causality emerged.

## CAUSAL CONNECTION DIAGRAM: CASE A

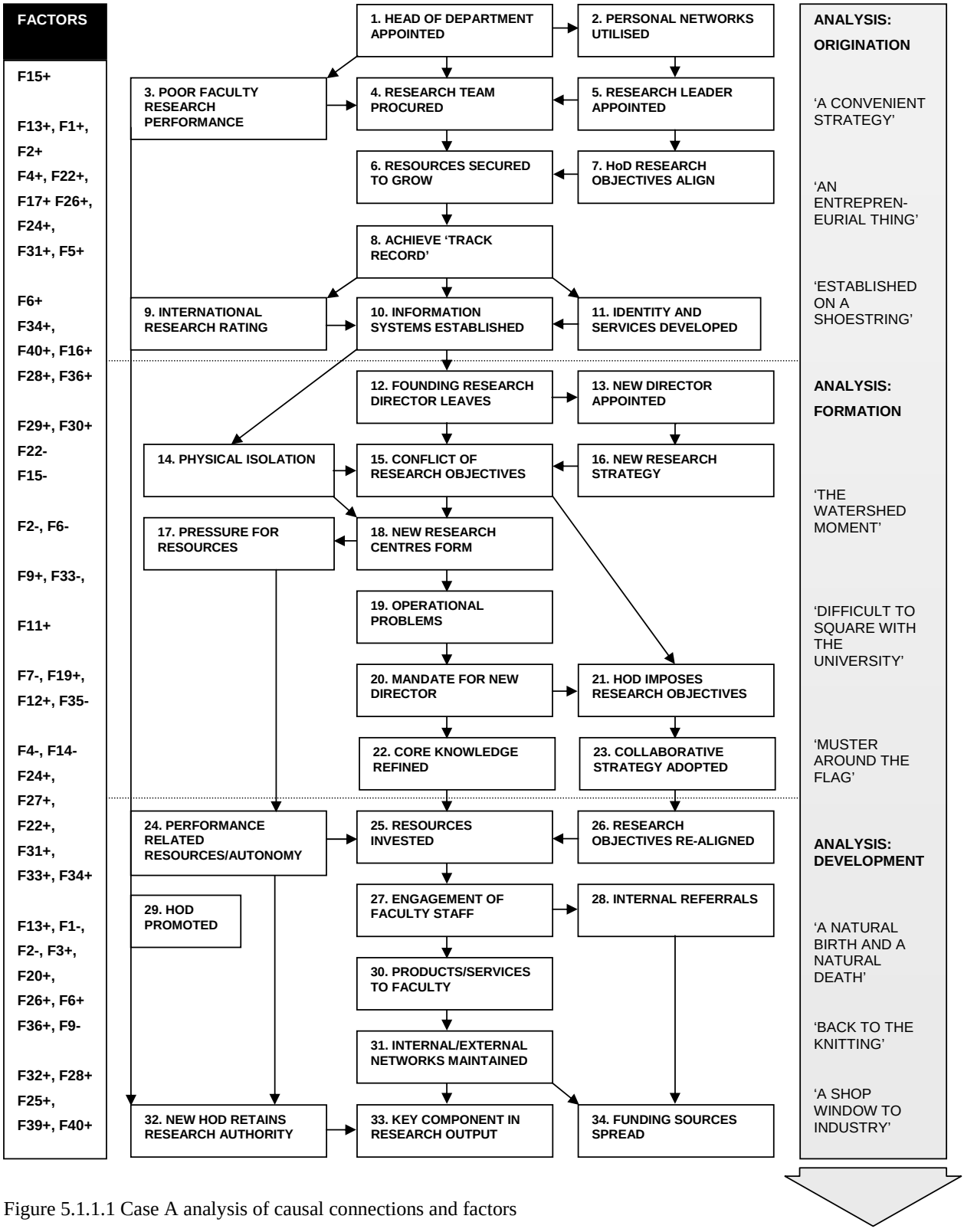


Figure 5.1.1.1 Case A analysis of causal connections and factors

## 5.2 ANALYSIS: ORIGINATION

| *CASE A* | *Director* | *Research Centre activity* | *University* | *Established* | *RAE rating* | *Staff* |
|---|---|---|---|---|---|---|
| **Centre for Design Research** | Jane | Design Management | Huxley (technological University) | 1990 | 1992 – 5<br><br>1996 - 5* (International excellence) | Between 5-10 |

Table 5.2.1 Overview of Case A

### 5.2.1 'A CONVENIENT STRATEGY'

The origins of Case A emerge from the mandate of a new Head of Department (HoD) at Huxley (1), eager to address the department's poor research performance (3). His appointment leads to use of his personal **HEI networks** [F28] to secure an emerging design research team from a neighboring University (4).

The leader of this group is seen as 'entrepreneurial' (5) and an **innovator/initiator** [F1] by those supervised by him. He is able to draw upon his previous **industrial input** [F26] to supervise research students and there is a clear **demand** [F34] for his knowledge and expertise (8). For Huxley, the move provides an opportunity to attract staff [F15] as a catalyst for research activity in line with the HoD's research ambitions.

> *'our tutor at the time was a chap called Dr John Gray who was fairly entrepreneurial and had been in contact with Huxley University and Professor Reed, who was then head of department of design and they hatched a plan to bring those contracts to Huxley'*
> (CaLEJT, p.10)

Yet the move to Huxley might not have occurred had it not been for the disinclination of National College to support such activity through dedicated **resource access** [F22]. Therefore, the opportunity to secure an **investment stakeholder** [F24] with access to equipment and dedicated studio space, leads to a mutual objective to relocate the newly qualified [F17] research team and bridge a gap in departmental research performance.

*'Now from Huxley's point of view Professor Reed had just taken over as head of department and inherited a number of courses such as industrial design engineering. There was little research activity within the department and I think it had a research rating of about two and one of his objectives was to really work at bringing the research rating up. This formed a convenient part of his strategy really, so it tied in well with what the department wanted as well.'*
(CaLEJT, p.10)

At the time of the Centre for Design Research forming, there is **synergy with HEI research policy** [F6] by fulfilling both the Research Director and HoD's agendas (7). Indeed, Dr Gray's appointment can be seen in the context of a **business plan** [F5] and a **strategic vision** [F2] to improve the department's research standing. In addition, the HoD would no doubt have received endorsement from his senior management colleagues by securing the new Research Director's **management experience** [F13], thus making an immediate impression in the post.

### 5.2.2 'AN ENTREPRENEURIAL THING'

The new Research Centre Director is aware of his value to Huxley, whilst being confident of his ability to undertake **risk and uncertainty** [F4] on behalf of the other team members who identify their own career development with his research leadership. He is able to use the situation to negotiate the **resource access** [F22] of the new Research Centre (space, equipment and research staff) on the basis that income will be derived through **demand for expertise** [F34] – an agreement that reduces the risk of the University as the prime **investment stakeholder** [F24]. These arrangements lead to the Research Centre's continued development (6) and tenure based upon a corresponding ability to secure income.

Hence the ability to achieve research outputs [F36] and manage client services [F31] for research and consultancy becomes the primary means to the Centre's survival.

*'It was a genuinely entrepreneurial thing because the key objective behind all the activity, and in a sense it is less of an issue today because we have become more established, that the absolute fundamental drive for everything at the beginning was money. So everything was focused on bringing the project in because without the money you didn't have a Centre, it didn't exist!'*
(CaLEJT, p.24)

### 5.2.3 'ESTABLISHED ON A SHOESTRING'

Not surprisingly, the Research Centre is keen to utilise **HEI networks** [F28] to broaden its client base as part of an intuitive approach to **marketing** [F29]. The work being undertaken – consultancy, supervision of research studentships and teaching – draws directly upon the researchers' postgraduate **education/technical background** [F17] in design and mechanical engineering. A strong track record in consultancy work soon follows (8) with a corresponding recognition by industry clients of the Centre's expertise in design development (11). Equally, the Centre's work makes an important contribution to the department's research performance, leading to an 'international' standing in the 1992 RAE (9) and a positive impact upon the HoD's career progression (28) – promotion to deputy Vice Chancellor.

> *'So these initial projects formed the basis for the early work here and we quickly took on work through the contacts of the University...Really, for the first two or three years of the centre the work was straight consultancy, providing design consultancy services for people because we were product designers and mechanical engineers by training. There was also a background stream of funding. We had a number of case student funding as well and we were also involved in teaching…So it was really established on a shoestring on the basis of those activities, and the University put a chunk of money into the building as well, to get it tidied up basically, with a couple of computers.'*
> (CaLEJT, p.10)

The culture of performance and reward also extended to the group's relationship with the faculty's undergraduate programmes and Research Assistants increasing their personal income through additional teaching responsibilities, whilst the programmes seek to draw upon the group's industrial experience and expertise.

> *'Well to be really bloody minded about it…when we first started getting involved with teaching the only reason we did it was for our own personal financial reward…I quite enjoyed doing teaching really…it was actually very useful from a learning point of view. As material was packaged together we discovered that we could always keep on updating it and we could bring an excellent industrial perspective to our teaching as well because all our projects here are with an industrial partner, so the value of it increased.'*
> (CaLEJT, p.34)

After the 1992 RAE, the original research contracts secured upon the group's departure from National College had now come to an end and alternative funding streams were sought. An increase in **public funding** [F40] to aid knowledge and technology transfer (see Chapter 4, University Context) from Universities to small and medium sized enterprises became a natural evolution for the consultancy work in a more formalised way, and several Teaching Company Schemes were developed. These schemes were principally funded by the Department of Trade Industry (DTI) and required the Centre to establish and maintain detailed **financial systems/information** [F9] and **project management** [F11] systems in accordance with the funding agency regulations (10).

> *'They then started a Teaching Company Scheme…and it opened the Centre up to a new funding move…So originally the centre was set up for graduates that were interested in Product Design and as they became more entwined into the University/Academic way of doing things…the head of the Research Centre looked at other research projects in terms of link projects, Teaching Company Schemes, other ways to develop the Centre.'*
> (CaSISF, p.8)

## 5.3 ANALYSIS: FORMATION

### 5.3.1 'THE WATERSHED MOMENT'

The Research Centre developed in this role until the founding Research Centre Director took up a professoriate at another University (12). Unsurprisingly, the success of the department's research performance and the growing **image and reputation** [F30] of the Centre had enhanced the standing of the Research Director in the field, and one can speculate that the lure of a professoriate was not wholly unrelated to the **competition for staff** [F35] between the 1992 and 1996 RAE, as the sector geared itself toward research (Frayling, 1993).

However, the inability to retain staff [F15] appears to mark a significant change in the **strategic vision** [F2] of the Centre (15) and indeed, the symbiotic relationship that existed between the HoD and the original Research Director (16). The subsequent promotion (11) of Paul Jones to take up the Director's post (who joined a year before Dr Gray's departure) highlights a period of instability, which appears to stem from an increased tension (15) and divergence from the department's own **research policy** [F6].

> *'John Gray left to take up a Professorship at New Jersey University in America and was replaced by a chap called Paul Jones who joined us in 1991 and his prime interest was designing products for animals and he had come to the Centre for Design Research to look at that specific topic. At the point of the departure of John Gray he was deemed to be the most suitable grown up – shall we say – to take over the role of Director of the place and really over the next period of time there was quite a shift in the terms of the work undertaken here'*
> (CaLEJT, p.12)

### 5.3.2 'DIFFICULT TO SQUARE WITH THE UNIVERSITY'

Evidently, the trust based relationship and mutual understanding that existed during the relocation of the research team is now brought into question and the Centre's **partnership/dependency** [F27] upon the department becomes apparent (19). Operational issues become *'a little bit strained'* (CaLEJT, p.49) through a tightening of **regulatory controls** [F33]. Ironically the original resource asset of a dedicated building to house the research activity exacerbates the pressure for **resource access** [F22] (17) and becomes associated with the Centre's growing isolation (14) from the rest of the faculty – *'it was*

*always quite different to the rest of the work within the design department and we are a separate building as well'* (CaLEJT, p.49).

This marks a period of reflection for the Centre's staff, and the origins of the Centre as a design consultancy – able to forge working links with industry for the department – which no longer carried with it unquestioned access to resources or operational support within the University.

> *'Rather than us acting as design consultants on projects which was difficult to square within the University as an activity…what is your core benefit? So round about 92/93 we realised that the most important thing we had in our knowledge bank was knowledge of the design process and most of the companies we had been working with up until this date…were very poor at managing product designers and projects…The design process became our core area of interest around that period and that's what we have stuck with and focused on.'*
> (CaLEJT, p.12)

### 5.3.3 'MUSTER AROUND THE FLAG'

The research environment changes with a new HoD (the former HoD having been promoted) championing the development of other research groups in the school. Indeed, the strategy adopted by the Head of Department appears clear, to concentrate research activity around a number of 'centres', each striving to achieve national and international standing in their respective fields but with the shared subject discipline of design. The Centre for Design Research appears to have been used as a basic model which is replicated to create a competitive and dynamic research structure with investment balanced against research performance.

> *'it is still set up in the way when I arrived except for the ASIS Centre which I set up in the same way as the CDR…They both have Directorates, they both have research assistant staff, technical staff and clerical staff and they have teaching responsibilities and Ph.D supervision responsibilities. This gives them a little core funding but they are self-supportive...I see the alliance with the other Research Centres developing*

*with bringing them together in a central location as at the moment we are spread out all over the building with rooms everywhere so it would be ideal to locate them into a research design building which would then promote an easier facility of synergy between the activities faster than I think we can do it without.'*
(CaLEPP, p.9)

This new regime of quantification and competition for the existing resources (18), leads to a shift in the way the Centre reflects upon its work and the contribution to the University research effort (24).

*'When Paul left Dr Jane Thompson took over and she has been the Director for the last two or three years and since then the work has gone more into Design Management and away from actual Product Design projects and that has evolved'*
(CaSISF, p.8)

A strategic review follows which questions the methodological base of the Centre and in particular the ability to 'build' tangible evidence of the 'core' knowledge which results from design practice. This has a profound effect on the way that the Centre views not only itself – its purpose and identity – but also in the way it views its clients – originally part of an 'entrepreneurial' activity firmly rooted in a market economy but now 'laboratory rats' (CaLEJT, p.45) in a social science experiment (22).

*'So it was all very well doing consultancy work but it had problems in terms of repeatability...If you can capture that expertise and make it part of your core knowledge you can then have complete repeatability within any organisation...Each time you work with an organisation you will build more knowledge on how to undertake this technique. It all starts by raiding the text books on how to do this and then you take this information and you refine it by actually trying to apply it… So that is research but it is using industrial projects as your laboratory rats for doing it.'*
(CaLEJT, p.45)

## 5.4 ANALYSIS: DEVELOPMENT

### 5.4.1 'A NATURAL BIRTH AND A NATURAL DEATH'

The Centre for Design Research had to reinvent its mission and purpose within a competitive research department with two Research Centres and three research groups (led by researchers with joint teaching roles). The present Research Centre Director is philosophical about the previous work undertaken by the Centre and sees the present research agenda as having evolved over several phases of development – a cyclical process of critical reflection, reinterpretation and reinvention. Yet, the critical events that led to periods of instability and change appear not to be self-directed but invariably imposed by the departure of key members of staff.

> *'in essence there are three phases that you might think of the Centre moving through. The phase of design consultancy, the phase of design process and now a very similar thing but a little bit more defined as a slightly different thing we talk about product development management and along the way there's various types of activity which have taken place which have had a natural birth and a natural death.'*
> (CaLEJT, p.14)

Indeed, it could be argued that the present Research Centre Director has secured a position of authority through close adherence to the HoD's agenda but the position carries little autonomy to be an **innovator/initiator** [F1]. The Research Director is fully aware of the Centre's **dependency** [F27] on departmental resources (24) and the need for compliance with the HoD's overarching **research policy** [F6] – the HoD retaining hegemony over any single Research Centre Director's decision-making capacity.

> *we operate as a cost centre within the department of design and we operate as cost centre quite autonomously but at the end of the day my boss is the Head of the Department of Design. All the decisions regarding recruitment or finances go through the Head of the Department and up through the University.'*
> (CaLEJT, p.49)

Jane's leadership is moderated by an underlying tightening of authority by the HoD who clearly retains ultimate control – through **financial systems/information** [F9] and in the power to **attract/motivate staff** [15] – of the department's research agenda. Whilst the Research Centre Director has been delegated with a small budget for staff **training and**

**development** [F14] (CaSISF, p.76), issues of staff promotion and remuneration are determined by the HoD. In fact the Senior Researcher appears to be resigned to this state of affairs on the basis that Jane's promotion to Director, ultimately necessitated more **time for planning** [F7] which has led to a largely 'management' rather than 'leadership' approach. Her **management experience** [F13] drawn from previous research projects appears to overshadow the leadership role for the Centre.

The Senior Researcher's response below, whilst indicating a sense of admiration for the Research Director's **desire to succeed** [F3], indicates an inability for the Research Director to be a **risk taker/uncertainty bearer** [F4] or indeed, to promote a personal **strategic vision** [F2] for the Centre.

> *'There is big difference between management and leadership. It is being more managed than led at the moment but that is not taking anything away from Jane as that is what was needed when she took over. It is a very safe step by step approach at the moment. There is no cavalier approach in any shape or form.'*
> (CaSISF, p.67)

### 5.4.2 'BACK TO THE KNITTING'

Ultimately the Centre has developed a professionally managed range of services to maintain, develop and utilise knowledge in response to demand whether from the research councils, professional bodies and/or industry. Both informal **information sharing** [F19] (open studio layout) and formal **communication systems** [F20] (e-mail, intranet and record keeping) are designed to enable effective management of knowledge. Management processes and procedures – **regulatory controls** [F33] – have been negotiated with other departments and the Centre aims to manage its relationships with large clients [F31] in a *'businesslike'* and responsive manner (CaSIJT, p.144).

Consultancy work with industry and professional bodies has formed an extensive part of the ongoing work undertaken in Case A. The Centre is responsive to **industry input** [F26] and has an ongoing development programme [F32] which has sought to sustain income. A **pricing policy** [F12] which provides hourly rates for consultancy, has been developed to provide transparency when invoicing clients and to highlight the professional service being provided (CaLEJT, p.89). In addition, it had led to the adoption of the action research model as the primary method of inquiry to translate theory into practice.

> *'We work with an organisation on product development management, extract lessons from that project and then disseminate them back through teaching and publication, process them and they can then provide the start point for another project with the company. So it's a closed loop in that respect and continually building knowledge in the area…there are always so many different things you could just go off and do but if you don't keep control of things then it very quickly gets watered down. You have to get back to the knitting every time'*
> (CaLEJT, p.20)

Staff's **industry experience** [F16] and awareness of **industrial development** [F39] and specifically detailed 'know how' of manufacturing processes and procedures, provide the basis of securing product development projects in the commercial market place. Importantly, this 'know how' is seen as **shared information** [F19], and **communication** [F20] systems enable each member of the team to benefit from any one individual learning experience, even when things go wrong: *'we are a team and if anything does go wrong we learn from the mistake'* (CaSISF, p.31).

In itself, this capacity to maintain and develop new knowledge would seem a valuable mechanism to provide new researchers with experience. However, the research staff's scepticism about the University's inability to retain senior researchers – particularly experienced staff, tempted by higher salaries created by **competition for staff** [F35] in the private sector – might suggest a contingency approach to researcher development as a means to counteract the loss of key staff [F15].

> *'it has had problems retaining staff and I think it will have problems recruiting staff that have sufficient experience. The pay and promotion structure within the model that we have at the moment means that you reach a certain level and it's difficult to get beyond where Jane is. The pay in Universities…considering the experience…means that the rewards in Industry are greater.'*
> (CaSISF, p.188)

Yet, there is no lack of knowledge communication with project reports filling the walls of the Centre. Staff meetings, cross disciplinary project teams, an open plan studio (author's observation), all supporting the view that systems are in place to enable research staff to learn from experience [F14].

### 5.4.3 ‘SHOP WINDOW FOR INDUSTRY’

One can only speculate upon the internal forces which contributed to the departure of two Research Directors (12, 13) but Jane’s appointment as Director indicates an acceptance of a balance of power by taking up the key task of departmental integration. Whilst this may indicate a personal agenda for the Centre's development (20), it also reinforces the view that the HoD's objectives must remain part of Jane’s leadership plans if her career is to progress (32).

The HoD therefore, retains **policy influence** [F25] through the University research committee. In practice, this leads to an increased integration of research informing teaching within the department (30) – at both undergraduate and postgraduate level. The Centre draws upon the knowledge of design management as applied within industry, and the subject programmes use the Centre’s industry experience to contextualise the students’ studies. Either way, the collaborative strategy (23) enables the Centre to become re-integrated with the department’s research community and in a similar way to its founding purpose, attain a position of industry ‘shop window’ for the department’s research and training services (28).

> *'one of my key tasks has been to get much better integration with the design department. So over the last two years it is something we have been working on here and it is something that we have achieved...we have a much better dialogue with the design department and they recognise much more what we do… we work on joint projects with design department staff now and the design department see us as a shop window to the industry.’*
> (CaLEJT, p.49)

In particular, the government funded Teaching Company Scheme appears to have paved the way for the Centre to develop its activities [F32] in concert with the department’s priorities (33) – by harvesting research outcomes from direct industry liaison – whilst receiving income for its involvement at the same time (each Teaching Company Scheme provides funding for supervision time over a two year period).

The **public funding strategy** [F40] of the RAE is therefore supplemented through a broad mix of income sources (34), including research for professional bodies, research council studentships, and research council contracts.

> *'the head of the Research Centre looked at other research projects in terms of link projects such as Teaching Company Schemes: other ways to develop the Centre…that has evolved into research work for the Design Association, developing course material and teaching and disseminating the work that we've learnt from working with Industry and also disseminating and picking out and doing new research projects in terms of Ph.Ds.'*
> (CaSISF, p.8)

## 5.5 Conclusions

The founding Research Director in Case A plays a significant part in the early formation of the Centre for Design Research. He is recognised by his peers as 'entrepreneurial' and demonstrates strategic awareness to re-locate the newly formed research group to Huxley with additional resources to grow the research activity (CaLEJTp.10). Demand for the group's research and consultancy services is created through the Research Director's network of industry contacts and the synergy of agendas with the Head of Department secures investment in equipment and a refurbished building (CaLEJT, p.10).

The HoD therefore, capitalises on a 'ready made' Research Centre to aid the department's research ambitions. Mutual objectives are met as the Centre contributes toward the department's international research rating in the 1992 RAE. However, the departure of the founding Director (CaLEJT, p.12) and the promotion of the HoD, creates a void in the Centre's role and purpose as a new HoD reviews the department's research strategy.

Agendas no longer remain synonymous as other Research Centres are established within the department and, for a period, senior management commitment is not maintained. The Centre is thrown into '*disarray*' (CaLEJT, p.28) as support and resource access are re-negotiated in light of the new research strategy. A brief period in charge by another Research Director is followed by the promotion of an internal member of research staff with the specific remit to achieve 'integration' with the department's research strategy (CaLEJT, p.49). The present Research Centre Director has sought to balance activities which are practice based but lead to tangible research outcomes. For example the Teaching Company Scheme appears to have created a significant market for the Centre's knowledge and expertise.

It can be argued that the present Research Centre Director's leadership is moderated by an underlying tightening of managerial control by the Dean who ultimately controls the development of the Research Centre and its allegiance to the faculty's research objectives. The HoD can be seen as an academic leader who seeks to specify the roles, remit and goals of competing Centres in the faculty whilst representing their combined interests on the University research committee. Thus, the internal identity of the Research Centre in Case A, and the leadership capacity of the Research Director are limited. Conversely, it can be seen that the HoD has created a 'contingency' approach to the faculty's continued research performance by ameliorating the impact of any lack of performance by any one research 'unit'.

Case A demonstrates the highest possible department research rating of 5* representing international research excellence and has consistently performed at the top level over the last two submissions. A simple analysis would conclude that Case A demonstrates a successful example of research co-ordination and management within this study. Indeed, the Centre itself has established a highly effective process for managing knowledge in an open and shared manner, to sustain its intellectual advantage through training, research supervision and research consultancy. However, this would ignore the complex relationship between the Centre and the faculty's management, which has resulted in a faltering development. Whilst the Research Centre initiated the thrust toward 'Centres' of research excellence in the department, it has itself been surpassed by a faculty structure which has sought to create a competitive research environment. This re-inforces the Dean's control over any one Research Director's individual authority and autonomy.

It is suggested that the present Research Director does not have the same charisma or entrepreneurial qualities of the founding Research Director (CaSISJ, p.22) but this may be the inevitable outcome of an internal promotion with conditions attached – the Research Director willing to use the opportunity to secure career progression at the expense of having very little control over the Centre's strategic direction. Crucially, the dynamic qualities and strong leadership of the founding Director – critical to the early formation and development of the Centre – are replaced by political gamesmanship, tact and compromise as the Centre has sought to consolidate its growth within a different context. The title of Research Director has in practice required an emphasis on management skills rather than leadership within a research policy framework driven by the Dean. As the Researcher pointed out, the Centre is more *'managed than led'* (ibid).

# Chapter 6: Case B

## 6.1 Summary of the approach

The Head of Faculty, Research Director and Senior Researcher from the Research Centre in Case B were asked to provide an auto biographical account of the set-up and development of the Centre from conception to current state. In addition, the Research Director and the Researcher were also interviewed using a semi-structured interview protocol derived from the *framework* of factors (see Chapter 2, Literature Review).

### 6.1.1 Interpreting the causal connection diagram

Figure 6.1.1.1 overleaf provides a synthesis of the evidence drawn from Case B. It plots the history of the Research Centre from the point of origination when a 'spin-out' from teaching facilitated the development of a dedicated resource for research into product development (nodes 1-5), to a position of sustainability (nodes 31-34), when the Research Centre co-ordinates research in the faculty and acts as an administrational 'hub' for emerging research groups. The boundaries between the development of the Research Centre drawn from the timeline on the left of the diagram (which includes the factors in play as derived from the *framework* of factors) and the development of nodes to explain the patterns of causality on the right, are intentionally blurred to mirror the dynamic and complex interplay within the case.

Each node is numbered to provide a cross-referencing mechanism during the empirical discussion in the rest of the thesis. For example (8) will refer to the node where a former Textile Centre was unable to sustain research funding and the Design Centre for Industry physically displaced it. Likewise, the reference codes in the analysis that follows (such as CbLEBP, p.17) refer the reader to the transcript and the paragraph within the interviewee's narrative from which the pattern of causality emerged.

## CAUSAL CONNECTION DIAGRAM: CASE B

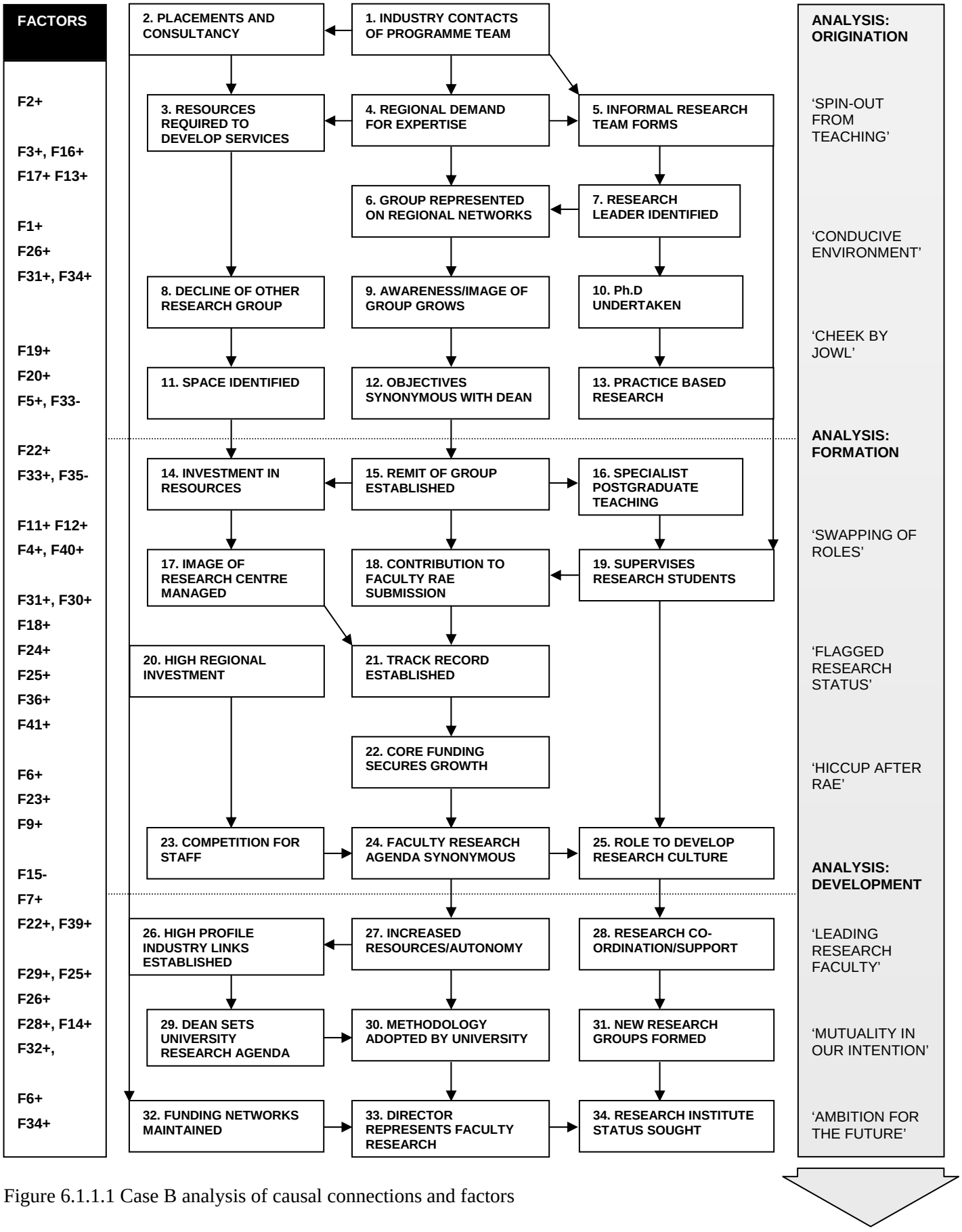


Figure 6.1.1.1 Case B analysis of causal connections and factors

## 6.2 ANALYSIS: ORIGINATION

| *CASE B* | *Director* | *Research Centre activity* | *University* | *Established* | *RAE rating* | *Staff* |
|---|---|---|---|---|---|---|
| **Design Centre for Industry** | Bill | Computer Aided Design, New Product Development, Industrial Design, Interactive Design | Fairfield (large former Polytechnic) | 1989 | 1992 – 4<br><br>1996 – 3a (National excellence) | Between 5-10 |

Table 6.2.1 Overview of Case B

### 6.2.1 'SPIN-OUT FROM TEACHING'

The Design Centre for Industry originated from an informal staff initiative (5) at the University of Fairfield through a shared **desire to succeed** [F3] with industry involvement in the industrial design subject area (1). The **industrial experience** [F16] of staff combined with the **educational/technical backgrounds** [F17] of their students created a **demand** [F34] for consultancy and placements by regional companies (2, 4) – part of the vocational culture in the faculty (CbLEBP, p.9).

> *'If I think back to the origins, the Design Centre for Industry originally sprang out of an initiative that the teaching staff took within the industrial design subject area of the faculty back in 1987/88…I have been teaching here since 1984 and the other key staff that developed the centre included one member of staff that's been here since 1975. In fact with other staff that joined in 88/89 …we realised that we were doing an increasing number of collaborative projects with industry and we were also doing a variety of consultancy projects as academic staff'*
> (CbLEBP, p.9)

It would appear that the pursuit of **industrial input** [26] had the potential to enhance the credibility of the programme area and its staff, both within and outside the University. However, the combination of new staff and the growing range of activities with industry (2) conspired to raise the awareness of limited **resource access** [F22] available to maintain and develop this work in a professional [F30] and 'business like' manner (3).

*'the profile of the projects was high or potentially high and we needed to convince the companies that we had an area to work in or at least an area to meet them in, where they wouldn't be overseen or overheard by students or by other staff that weren't involved in the programmes.'*
(CbLEBP, p.10)

### 6.2.2 'A MORE CONDUCIVE ENVIRONMENT'

A plan was put forward by staff to secure suitable resources to concentrate these activities and a period of negotiation at faculty level is evident. Three requirements are put forward as essential conditions for the work to continue – a professional environment, a confidential and secure area, and a space to display and exhibit work.

*'we were rather frustrated some times with the quality of environment which we could bring industrial people into… a rather more conducive environment. The sort of environment that industry perhaps was coming from themselves.'*
(CbLEBP, p.9)

The experienced members of staff within the informal group (5) identify a suitable space (11) and share their **strategic vision** [F2] with senior management of a dedicated resource for industry and specialist teaching in computer aided design software (9). Hence, a formalised space was established which portrayed the desired **image** [F30] with a corresponding **investment** [F24] in 'high-end computer' equipment by the faculty.

The centralisation of resources provided the foundation for the Centre to operate as a discrete unit (15) – in direct response to the identification and management of large client [F31] needs, and the delivery of specialist industry computer training to undergraduates. In addition, the symbiotic nature of the relationship between the research group, their leader (7) and the Dean becomes apparent through an enhanced status for the staff involved and a common desire to maximize the 'profile' associated with the companies involved with the industrial design subject area (12).

*'we evolved a space on the second floor of this building right in the middle of the teaching area for undergraduates…We also used it as a venue for high end computing and on the basis of some of the project work that we had done, and the fees that had been earned from that, we were able to buy UNIX based*

*workstations…we had a showcase to show to students…They could see the results of that work and they could also be inducted in some cases to using the equipment.'*
(CbLEBP, p.13)

### 6.2.3 'CHEEK BY JOWL'

The establishment of the Centre was therefore self-styled by the subject staff, but the appointment of a new Dean in 1992 brings into question the nature of its consultancy services and the independent promotion through its own **marketing plan** [F29].

*'At that stage there was no system within the then Polytechnic for formally designating Centres. It was just simply put together and you called yourself that. Nobody in particular challenged it or talked too deeply about it.*
(CbLEPR, p.9)

A change in the balance between teaching toward research and consultancy services was evident and the regional **demand** [F34] for the group's knowledge and expertise had grown (9). In reviewing the group's teaching role it was recognised that the focus should be postgraduate students, in line with the nature of the specialist research activity being undertaken.

*'That worked quite well for a time and the consulting activity, and the research activities and the teaching activities within that space more or less tended to work on a fairly cheek by jowl basis… the appraisal decided that we were trying to teach skills at too high a level to a large a number of students…What we did identify though was that there were particular types of design students who seemed to do very well and there were possibly other ways of nurturing those skills other than to throw everyone into it. We became a little bit more strategic'*
(CbLEBP, p.15)

## 6.3 ANALYSIS: FORMATION

### 6.3.1 'SWAPPING OF ROLES'

This point marks a re-direction for the Centre from large scale teaching provider and industry liaison co-ordinator to highly focused research and design consultancy with specialist post-graduate supervisory responsibilities. However, this approach required faculty approval to achieve the required investment and **resource access** [F22].

> *'What we did do at that stage was to make a plea to the faculty…where the quality of space was demonstrably better laid out and resourced than the majority of studio teaching areas. We suggested that area should be kept as a specialist area for contact between students and industry to undertake presentations, seminars and peer group review. And that the high end computers should be taken out with middle order computing to be put in their place, high end Mac equipment for instance. It took a while for the faculty to be able to organise and resource this'*
> (CbLEBP, p.17)

To gain acceptance, two factors weighed heavily in the Centre's favour, a successful track record of achieving income from industry research contracts and more importantly, another Research Centre within the faculty which had dedicated space, had been unable to sustain its research interests after core funding had ceased (8). Hence, mutual agendas were served: the Dean was able to replace one research activity with another in a bid to maintain research performance, and the research leader's personal objectives were met through the establishment of a significant research and consultancy capability (12).

> *'at that point there was a Textile Centre…which was set up with the Department of Trade & Industry money initially but it collapsed about two years after I became Dean. The space then was occupied by the Design Centre for Industry which was manifestly more successful in terms of attracting external contracts and so on'*
> (CbLEPR, p.9)

As the Research Director points out: '*there was a kind of swapping over of roles.'* (CbLEBP, p.17). Furthermore, the regional networks established by the research leader (6) led to a methodological 'bridge' being spanned from short term 'jobbing' work, which inevitably did not enable analytical reflection of the design process, to long-term product development that could be critically evaluated as case studies in design management (13). A

**partnership/dependency** [F27] approach is therefore evident whereby the Centre's ability to compete [F36] for external projects is supported through the redeployment of faculty resources in return for research outcomes appropriate to the faculty's **research policy** [F6] (13).

> *'we became aquainted with some of the pharmaceutical and medical product manufacturers…that had a natural momentum of it's own, so one project has tended to lead to another. The other advantage although its an advantage as well as a disadvantage of this kind of work, is that it does tend to have a longer development from product concept to market. And we found that in some respects that was very useful in terms of monitoring the design process and saying something about a design process – where something happens very quickly due to market pressures it is often very difficult by working at such a quick rate that a lot of thinking gets lost in all the flurry of trying to meet deadlines.'*
> (CbLEBP, p.29)

### 6.3.2 'FLAGGED RESEARCH STATUS'

Having achieved the resources and **HEI networks** [F28] from which to build a sustainable client base the Research Centre Director is able to pursue the research agenda and indeed, clarify the process by which new research contracts may be judged (15). Equally, the clarification of this remit brings with it both **risk and uncertainty** [F4] in respect of the Research Director's own professional credibility – the informality of the former group of staff engaging in consultancy, making way for a formalised capability for the faculty to secure a research profile and supervision capacity (16, 19).

> *'when we first began working…we were fairly diffuse in the way we went about that rather than identifying a particular area and saying we are only going to work in this area but we did say that any work we did ideally should have a research dimension to it. So it would allow us to say something about reflective designing and reflective design processes, or design methods or design process and, it would allow us to work at the cutting edge of product development with respect to new products rather than incremental products.'*
> (CbLEBP, p.29)

By 1992, the Centre became a key contributor to the Art and Design faculty's submission to the RAE (18) and achieved a rating equivalent to international excellence in some areas and

national excellence in a substantial majority of other areas (HEFCE, 1992b and 1996). Discussions surrounding the breadth of the research work being undertaken within the faculty and the role and profile (25) of the Design Centre for Industry led to a change in strategy (CbLEPR, p.9). The 'Industry Research Centre' was formed as a vehicle to promote a wider range of disciplines within the faculty (28). This approach led to the newly titled Centre achieving 'flagged' status in the 1996 research assessment (HEFCE, 1996) due to the profile of its research work for industry (26).

> *'The Industry Research Centre (IRC) was given a flagged research area status in the last RAE…The Industry Research Centre was started really when we first put our brains together for the RAE I suppose, when we were having to write the narrative that went with that.'*
> (CbLEPR, p.9)

This decision would seem to have been mutually beneficial to the Research Director and the Dean; a coherent and underlying **business plan** [F5] was put forward in the faculty's research submission and enhanced status and role bestowed on the Research Director (29). Although it is not clear who demonstrated the **strategic vision** [F2] which led to the decision (mutual consensus is apparent in both parties accounts), the profile (27) of the Centre for Design Research, and in particular, the **management experience** [F13] of the Research Director is formerly recognised by the faculty as the University research committee representative (CbSIBP, p.67).

The Research Centre Director's role as an **innovator/initiative** [F1] is also confirmed, as is his willingness to **bear uncertainty** [F4] on behalf of the faculty. Furthermore, the increased remit of the Centre utilises the Research Director's experience to lesson the burden of **regulatory controls** [F33] on emergent research groups. Interestingly, the Research Director likens this re-structuring to that of the commercial sector – derived as the result of successful growth.

> *'One of my jobs is to look after research for the faculty …We have two other research groups of critical mass in the faculty and these operate within a broader umbrella in what we call the Industry Research Centre so it's kind of circles within circles…The Industry Research Centre acts as an administrational centre for all the centres and for the smaller groups and the individual researcher. It manages the financial side of project work so it is on the basis of the RAE HEFCE grant…It is quite a fluid relationship and it mirrors federal commercial and industrial organisations that are*

*operating in the private sector now as bigger groups spin out new companies all the time.'*
(CbLEBP, p.34)

For the Dean, this approach would also appear to resolve a potential repeat of earlier problems when the Textile Research Centre (which the Centre for Design Research physically displaced, CbLEBP, p.17) had become a drain on faculty resources due to its **overhead costs** [F23] (CbLEPR, p.9).

*'We've come out of the bruising experience of having to close the Textile Centre down but at the same time we were very concerned not to give a signal that this was not an area that was no longer prioritised…The Product Design Research Centre was very clearly sub-discipline orientated and the sum total of the Faculty was much bigger. If we went with that title we were badging ourselves in a limiting way. That's really how it came about and we retained Industrial Design Centre but it is actually just a shadow within the larger Centre. It was seen as a mechanism to maintain the momentum.'*
(CbLEPR, p.9)

However, whilst the new research 'hub' (28) provided the Research Director with greater oversight of **financial systems/information** [F9] and control of HEFCE's research grant, careful monitoring and **project management information** [F11] is evident within the University's **regulatory procedures** [F33] to retain a balance between autonomy and accountability (27).

*'we have to declare a target every year to the Business Development Company (BDC) at the University…and we have to report to Board meetings of BDC of which there is one critical board meeting each year at which the Director of Finance attends and we have to make a report at that point. If there are concerns from BDCs point of view about the target not being reached and they feel they need to understand reasons for that, then the special meeting is set up between the Finance Director, possibly the Head of the Commercial Enterprise Unit and myself…and the Head of Faculty. That would be the normal process and it operates across the University like that.'*
(CbSIBP, p.52)

### 6.3.3 'HICCUP AFTER RAE'

Although 1996 was clearly a high point for the faculty following the research submission[91], the inability to **attract and retain staff** [F15] due to regional competition for labour [F35] and expertise in product development (CbSIBP, p.184) appears to have led to a period of instability for the Centre (23). Whilst the University retained the current Research Centre Director and founding member of the Design Centre for Industry, key members of research and teaching staff with **industry experience** [F16], relocated to establish a product development facility within a local company: *'because they had been made an offer that they couldn't refuse'* (CbSIBP, p.184).

> *'There was a hiccup shortly after the last RAE when we lost a number of key staff who went out into industry, but we have got over that and re-built those areas of expertise and we are moving ahead very fast now and it is partly that trajectory that gives me confidence…There is a kind of ground swell of continuous development happening. I'm pleased with what has happened there in the last year.'*
> (CbLEPR, p.9)

Whilst this departure appears to have been amicable, there is disappointment in the response of the Research Centre Director who recognises a perennial problem of comparative remuneration between industry and the University sector, which ultimately threatens the knowledge base of the Centre.

> *'I think one of the biggest problems we have is the competitiveness of getting key staff in respect of salary scales and funding levels that vary [across non-profit and commercial sectors]. We have no problem in identifying excellent research material in terms of key staff and workers because of the range of courses that we have within the University. But what we do have a problem attracting them and making it a desirable career.'*
> (CbLEBP, p.10)

Indeed, one might ask why the current Research Centre Director had not been tempted to capitalise on his own industry expertise in this way. The account of the senior researcher in this respect is quite revealing, not just in the level of reverence in which he is held, but the suggestion of 'comfort', indicating a level of security in his working environment at Fairfield. One could conclude that the level of autonomy and resources access (27) that the Centre has

[91] Although the departments quality research rating remained largely unchanged, the number of research active staff significantly increased as did the HEFCE research grant (HEFCE, 1992/1996).

attained under the Research Centre Director's management is in accord with his own personal approach to life and work.

> *'Certainly with Bill he is a very academic person and he has to be. I had a look at his Ph.D and just went pale…I have great respect for him and the more I know him the more I respect him. As a student [at undergraduate and post-graduate level] you are not really aware of what people are doing outside the course and obviously when I started working I realised how much they actually have to take care of and do things. I think you appreciate him more and more. I'm not sure what he did after graduating but he probably feels more comfortable here.'*
> (CbSIJM, p.88)

## 6.4 ANALYSIS: DEVELOPMENT

### 6.4.1 'LEADING RESEARCH FACULTY'

The Centre now occupies a role of a 'research consultancy' (CbLEBP, p.38) and co-ordinates new research group activity in the areas of product development such as visual communication, interactive media, fashion and textiles (CbLEBP, p.17) (31). The remit to co-ordinate this last field of inquiry finally closes the loop on the former Textile Research Centre which it physically displaced (CbLEBP, p.13). Its methodological approach is based upon action learning through practice and uses research tools and techniques to record, reflect, and analyse the design process through case studies.

> *'I suppose this is recurrent for many Research Centres in recording thoroughly the processes you go through… but over a period of time we have developed a number of resources and methods of working to get round some of these problems…We have evolved things such as cameras for capture of group meetings and recording equipment so we can edit brainstorming events and client meetings and download case study material from this.'*
> (CbLEBP, p.30)

The staffing structure of the Centre retains flexibility through a constant core of full time researchers and a 'pool' of faculty staff who move in and out as projects dictate. A close working relationship with the industrial design subject area remains and the Centre provides an opportunity for staff to engage in professional **training and development** [F14] through its links with industry, whilst being in a supportive environment.

> *'All the staff that are here have combined roles. We have six dedicated staff in the area but we have staff moving in and out of the area between different research projects, consultancy and teaching responsibilities as well, so we very much retain a very close relationship with the subject area of industrial design.'*
> (CbLEBP, p.38)

However, the Centre is no longer an informal initiative of industrial design staff but a co-ordination and management structure for the faculty's research and industrial liaison activities (26). The Research Director dedicates more **time for planning** [F7] than 'hands on' product development (CbSIBP, p.27) and industry standard **quality control procedures** [F18] (ISO9000) have been developed alongside project information and communication systems

[F19/F20]. Responsive **client handling** [F31] is evident which informs the Centre's **marketing plan** [F29], whilst being self-critical of the ability to implement it (CbLEBP, p.146). The Centre promotes an **image and reputation** [F30] associated with a leading 'research consultancy' for new product and design development. It has the support of the Dean, who is Chair of the University Research Committee (29) and as the largest research active faculty at Fairfield, it has had a major significance upon the University's policy to prioritise practice based research (CbLEPR, p.9) (30). Thus, **synergy with HEI research policy** [F6] is maintained and at faculty level, it is a recognised 'conduit' (CbLEPR, p.9) for collaborative links with industry.

> *'The present Design Centre for Industry is a vehicle for badging the research across the disciplines whether we are talking graphics or multi-media or fashion as well as obviously the core material which remains Industrial Design and it's predominantly people from an Industrial Design background who work in there but it doesn't mean it's exclusive to that.'*
> (CbLEPR, p.9)

### 6.4.2 'MUTUALITY IN OUR INTENTION'

Due to the region's **economic and social conditions** [F37, 38] and **location** [F41], the Centre is able to benefit from significant **industry input/industrial development** [F26/F39] supported by the European Union. The Research Director has developed strategic alliances with the enterprise agencies to influence **public funding strategy** [F40] and to provide referrals to new funding streams in line with the Centre's research aims (32).

> *'You keep a track of European Funding Schemes, Research Council Funding Schemes so that we can see the new-thinking procedures that are happening there. It's also a good way of finding out which research themes and ideas are seen to be involved in those kind of circles. It's a good sort of 'acid test'. There are questions of course at times. The relevance factor is of course important. Often you have to consider: Are we doing something differently?; Is our thinking different because we are out of touch or out of tune?; Or is it the case we are thinking of that which is further ahead? That's a useful basis for self-evaluation.'*
> (CbSIBP, p.47)

Such a diverse range of funding sources has led to a detailed **pricing policy** [F12] which takes account of the Centre's overheads. The Research Centre Director is in a unique position to influence regional **policy making** [F25] and opportunities are co-ordinated through his position as Chair of the faculty's research committee (CbLEBP, p.34) (33).

However, the Dean is not complacent and recognises that the Research Centre still may become a liability if it is unable to remain responsive to the needs of industry and the research councils. In this respect the fate of the Textile Research Centre – closed down following the Dean's appointment – has clearly provided lessons for both financial and business planning. He advocates a 'bid writing culture' which dovetails core activities with opportunities that arise through market demand. This is particularly relevant in an area of high **public funding** [F40] dispersed through many funding streams. In this respect, the Dean is aware that the regional **demand** [F34] for the Centre's knowledge and expertise has further potential which is yet to be realised.

> *'it has enormous potential but it hasn't yet been quite realised and maybe there needs to be a more highly developed bid writing culture but it's moving in the right direction and I feel comfortable with it at the moment so I am not wanting to close it down. That's not on the agenda. We've had to do it in the past and we would obviously do it again but that is looking in a very negative way and I don't see that even remotely on the horizon. What they are doing at the moment is much more rigorous business planning and having to persuade us all that they have done the risk analysis and looked at the potential in certain areas and they are likely to get the contract. That has become part of a process.'*
> (CbLEPR, p.9)

### 6.4.3 'AMBITION FOR THE FUTURE'

A recent appointment of a Vice Chancellor (34) with a background in medical product development (CbLEPR, p.9) has provided the Centre with a new opportunity to achieve University Research Institute status (34). The development of such an initiative appears to bestow kudos upon the Dean (as the prime instigator of the University research strategy) and the Research Director (as the central figure in the Centre's development).

To achieve this objective, investment in new appointments have been made to replace staff expertise lost due to the regional competition for skilled labour.

> *'They have applied to the University formally for Research Institute status. I can't second guess that and whether or not it will actually deliver the Institute status to them. As a result of that one of the requirements will be in fact that they become self-financing and sustainable unit in their own right after three years. That's a condition with University funding for each of its Research Institutes and we have a couple of those at the moment in a couple of areas that are both running very successfully at the moment and we want to commission a number of new ones of which design might well be one. That's the current position with a sense of ambition for the future.'*
> (CbLEPR, p.9)

## 6.5 Conclusions

Bill's career development and the Research Centre's development have progressed in parallel. His intrapreneurial aptitude for developing collaborative links with industry and regional networks with professional bodies enabled him to combine his lecturing responsibilities with design research consultancy. His personal expertise as a product designer combined with his Ph.D in product development has made him a respected figure. His leadership skills were recognised and nurtured by senior management as the informal 'spin out from teaching' (CbLEBP, p.13) became a formal part of the faculty's research strategy.

However, the resources and space afforded by the Dean, may not have been so forthcoming had it not been for the failure of the former Textile Centre to sustain funding. The gap in research performance and the desire of a new Dean to develop research within the faculty meant that the Design Centre for Industry was clearly an ideal opportunity to maintain the research agenda. The new research group was able to develop a fully resourced industrial design research and consultancy studio outside the auspices of the subject area by redeploying exisiting resources. In return the new Centre provided a specialist teaching role for postgraduate students.

The growth of the Centre's work was further encouraged by the high degree of regional funding due to low levels of employment and significant economic investment in manufacturing (e.g. European Regional Development Fund; ESF Regional Guidance, 2000). Some of this investment was targeted at small manufacturing businesses in need of product development skills and expertise from which the Design Centre for Industry was able to capitalise.

In particular, the early engagement with the regional committee for medical affairs proved to be a highly lucrative move. The nature of this work, with an increased need for ergonomics, product performance and sophisticated manufacturing processes, meant that the Centre was able to investigate the product development process in greater depth whilst securing core financial income from consultancy fees. The work positioned the Centre at the forefront of medical product development for multi-national companies, which bestowed a high degree of profile on the University.

To summarise, the Research Centre in Case B has had an organic development which has stemmed from a high regional demand for the research staff's knowledge and expertise. Intraprenerial activity by the founding Research Director consolidated and developed this demand into a highly effective 'research-led design consultancy'. Indeed, Case B does not

seem to have faced any periods of resource or operational neglect by senior management and it would appear that research objectives have remained synonymous with the Dean throughout its development. Whilst this has yielded a high degree of autonomy, this is tempered with stringent financial targets and a clear business plan. Bill's narratives identify a strong bond of trust and a high degree of operational latitude within their relationship. Equally, credit for the Centre's development has been shared along with responsibility for research – the Dean is responsible for the University research strategy. The success of the Centre, under the Research Director, is seen as being 'home grown' within the faculty, creating a shared social construction of research culture 'by' staff 'for' staff.

In this respect the Design Centre for Industry is an integral part of the University and is supportive of other centres and groups within the faculty. Here, the Research Centre Director demonstrates ambition and motivation to 'spin out' new research areas within the faculty by managing the University 'bureaucracy' on behalf of others.

Therefore, developments in faculty research have become inextricably linked to the Research Centre Director. He is seen as being 'democratic' in his decision making processes and his personal ambition would appear to have been fulfilled through the Centre's development. Furthermore, the final endorsement of his status within the research community appears to be within his grasp – as professor of a Research Institute.

# Chapter 7: Case C

## 7.1 Summary of the approach

The Vice Chancellor, Research Director and Senior Researcher from the Research Centre in Case C were asked to provide an auto biographical account of the set-up and development of the Centre from conception to current state. In addition, the Research Director and the Researcher were also interviewed using a semi-structured interview protocol derived from the *framework* of factors (see Chapter 2, Literature Review).

### 7.1.1 Interpreting the causal connection diagram

Figure 7.1.1.1 overleaf provides a synthesis of the evidence drawn from Case C. It plots the history of the Research Centre from the point of origination (nodes 1-5), when University strategy prioritised the research agenda and an assistant Dean was appointed with a research remit, to a position of sustainability (32-34) with the Centre attaining Research Institute status under the direct line management of the Vice Chancellor. The boundaries between the development of the Research Centre drawn from the timeline on the left of the diagram (which includes the factors in play as derived from the *framework* of factors) and the development of nodes to explain the patterns of causality on the right, are intentionally blurred to mirror the dynamic and complex interplay within the case.

Each node is numbered to provide a cross-referencing mechanism during the empirical discussion in the rest of the thesis. For example (16) will refer to the node where the new Dean promotes a strategy of teaching over research. Likewise, the reference codes in the analysis that follows (such as CcLEFJ, p.34) refer the reader to the transcript and the paragraph within the interviewee's narrative from which the pattern of causality emerged.

## CAUSAL CONNECTION DIAGRAM: CASE C

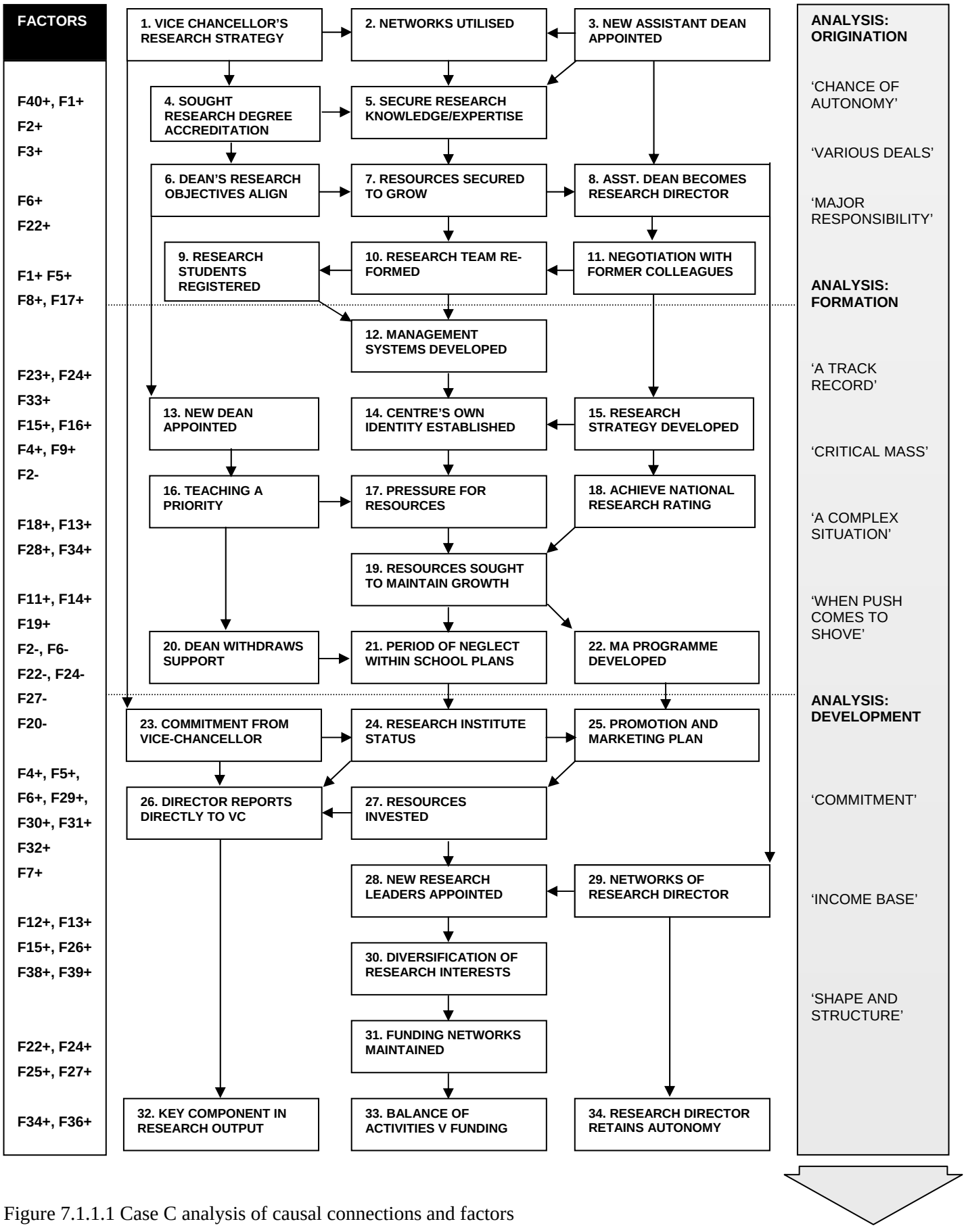


Figure 7.1.1.1 Case C analysis of causal connections and factors

## 7.2 ANALYSIS: ORIGINATION

| *CASE C* | *Director* | *Research Centre activity* | *University* | *Established* | *RAE rating* | *Staff* |
|---|---|---|---|---|---|---|
| **Centre for Design Research** | Fred | Computer Aided Design, Digital Imaging, Interactive Design | Middleton (former technological college) | 1992 | 1992 – 2 1996 – 3b<br><br>(National excellence) | Between 10-15 |

Table 7.2.1 Overview of Case C

### 7.2.1 'CHANCE OF AUTONOMY'

The origination of the Centre for Design Research at Middleton came about during a period of significant change in **public funding** [F40] strategy toward the former Polytechnics. A competitive situation is evident in the Vice Chancellor's account which highlights the pressure on the institution to pursue a research strategy (1) with some urgency, to join an elite group of former Polytechnics that had achieved research degree awarding status (4).

> *'If you wanted to become a University you could, but you'd have to do something only eight other Polytechnics had done, get accreditation from the CNAA for Research Degrees which would take about 10 years. Because in order to set up a Research Degrees Committee, which would have power to register students for Mphil…you would need to have set up a body of whom 30% had supervised at least three Ph.Ds to a successful conclusion…This drawbridge was actually a chasm – it was impossible!*
> (CcLEGS, p.9)

The necessity to **attract/retain staff** [F15] with research degree supervision experience is an obvious factor in Fred's appointment at Middleton (3). Indeed, the ability to secure an instant research capability (5) is immediately recognised by the Vice Chancellor who uses his **HEI networks** [F28] (2) to secure his expertise by providing autonomy and support for additional resources (7).

Mutual objectives are therefore achieved – the Vice Chancellor's desire to achieve University status for Middleton and the new Assistant Dean's ability to pursue and develop his research agenda with the Dean of Art and Design (6).

> *' I made two Assistant Dean appointments, which provided two very different views and ideas. Fred (Jackson) was one of them – he had done Fine Art at Rushton and was the Co-Director of the Rushton University Computer Interface Centre. He had some very fascinating ideas about the professionalisation of design practice and the development of design use. I discovered that Fred and the people he worked with were developing their strategies so well that they were beginning to run out of things to do. I offered them the chance to come and work at Middleton and build the research group, which would give them more to do. We set up the Centre for Design Research. We were able to offer these people the chance of autonomy in this situation'.*
> (CcLEGS, p.22)

### 7.2.2 'VARIOUS DEALS'

The new Assistant Dean is able to draw upon extensive research **management experience** [F13] from his previous position as joint Director of the RUCIC centre at Rushton University. His experience in setting up the RUCIC centre with his former Ph.D supervisor provided a chance for early career progression and expertise in the combination of technology and Art and Design practice. Furthermore, under the mentorship of his former supervisor, with whom he had already established a Research Centre at Painton, Fred's skills as an **innovator/initiator** [F1] were evident before moving to Middleton.

> *'When I had finished my Ph.D I stayed on at Painton as a Lecturer in Computing and moved with George Jones [Ph.D supervisor], and we actually set up a Centre called the Computer Research Unit. I moved with George Jones to Rushton University in 1986, and there we set up a Centre…called RUCIC (Rushton University Computer Interface Centre)…well, at that time there wasn't a strong connection between the University of Rushton and Rushton College of Art & Design and I really wanted to be back in an environment where there were users for the systems that I was developing…I wanted to get back more into an Art and Design context and the opportunity arose in 1992 to come to join here.'*
> (CcLEFJ, p.10)

Fred uses his position of authority, with the endorsement of the Vice Chancellor, to achieve **resource access** [F22] in forming the Centre for Design Research upon appointment. In addition, he has the **strategic vision** [F2] to do 'various deals with Rushton' which include the transfer of researchers and several projects to immediately commence work at Middleton (11). This period of negotiation demonstrates a strong **desire to succeed** [F3] and an ability to undertake professional risk [F4] through a strategy to invest resources in areas of potential 'quality related' research output (HEFCE 1992b).

> *'I came as Assistant Dean in the School of Art & Design and one of the first things that I did at that point was to set up the Centre of Design Research. So when I came, there was myself, and a visiting researcher who was working on a project that we had left at Rushton. We did various deals with Rushton, they were very supportive of us actually, but one of the deals was that we left two projects with Rushton. But anyway, this Researcher came with me as a Visiting Fellow and helped me to set up the Centre and one of my Masters students who had just finished at Rushton wanted to come and do a Ph.D, and came as a part-time student while she was trying to get some funding. So there was actually just the three of us.'*
> (CcLEFJ, p.12)

Former research colleagues are attracted to Middleton (11) and terms are agreed for the transfer of projects and research students (9) which Rushton is no longer able to supervise. This period of re-formation for the research team (10) is recounted by the Research Director in terms of a commodity, which is 'brought' to Middleton and which has an existence independent of the University itself. He is clearly aware of the **demand** [F34] for the research capability he is able to offer in a period of increased **competition for staff** [F35] as HEIs sought to bridge a gap in Art and Design research performance.

> *'I'd left a couple of projects behind at Rushton and one of those projects was concerned with colour management systems…When that project finished the key Researcher there, a chap called Steve Rome…didn't want to go back…and I persuaded the University to bring him here together with one other individual as a Research Fellow...So by 1993 we had kind of expanded, doubled…What we brought was that we all had experience…in the preparation and submission of proposals for funding. We'd managed those proposals over a fairly extensive period of time so we had quite a track record if you like, in terms of actually obtaining external funding and then running the project successfully. We were both publishers if you like, we*

*both produced a lot of papers so we had a lot of experience in what you might call a traditional sort of research environment…and we both were experienced in supervising research students to completion. So we had got quite a lot of experience in the sort of basic things of research: getting the money to do it, doing it, producing the outcomes and also training of Ph.D students. So that's really what we brought to Middleton.'*
(CcLEFJ, p.21)

The new Research Centre Director has a clear mental formula of how to establish a successful Research Centre and there is a confidence in his ability to secure research funds, supervise research students and publish research outcomes. This is supported by the creation of dedicated **financial systems** [F9] and **management systems** [F11] (12) building upon the team's prior experience of supervising research students and managing externally funded research projects at both Rushton and Painton.

### 7.2.3 'MAJOR RESPONSIBILITY'

The rapid expansion of the Research Centre between 1992 and 1993 is recognised by the Vice Chancellor who sees Fred as a catalyst for the development of further research capability within the University. His appointment to the position of Research Director (8) for the University is an endorsement of his research expertise and confirms the continued support of the University as an **investment stakeholder** [F24] in research.

*'In January of that year I was appointed Director of Research for the University and so had a major responsibility in terms of actually developing research…and one of the things that we did was to develop a strategy where we focused research activity into centres and groups and we established…So we actually, as an Institution, went down the route of focusing our research into Centres and groups but were located within the School or Faculties as they then were.'*
(CcLEFJ, p.14)

The Research Director's strategy draws upon the Centre for Design Research as a model for the formation of discipline aligned research groups across the University.

## 7.3 ANALYSIS: FORMATION

### 7.3.1 'A TRACK RECORD'

Throughout this period the Research Centre continues to grow its research contracts and research student base and enjoys the privileged position of being a 'priority' within the Universities research strategy (15).

> *'We got additional projects. You know we managed to replace those projects, so we got additional research funding and it was really just slowly building that up and keeping the work that had been done at Rushton going…we had a track record so we weren't starting from nowhere and those were things that we could actually take forward and we did. The other thing that was important, we attracted post graduate research students.'*
> (CcLEFJ, p.42)

The experience of managing the Research Centre at Rushton, is still evident in the **business plan** [F5] envisaged by the Research Director, who seeks a balance between research degree registrations and research contracts, in order for income to be maintained – thus ensuring the strategic alignment of funding streams in accord with the Centre's growing identity (14) and **image** [F30] for design research and colour imaging.

> *'When I was at Rushton, one of the things that I was not happy about was that we had put a lot of our eggs into research contracts…We had too many contract research staff and not enough research students so you are endlessly trying to find new contracts as a sort of income to replace the ever increasing number of research fellows that you've got or research assistants and I think that the danger of that means that you are virtually forced to go for anything.'*
> (CcLEFJ, p.42)

### 7.3.2 'CRITICAL MASS'

**Societal issues** [F38] in the use of new technology increase demand for the Centre's knowledge of colour science and interactive computer environments. Multi-national clients are secured as the Centre achieves a 'track record' of research output and the Research

Director's attention moves to the establishment of a sustainable base of research staff. The ability to achieve a 'critical mass' of research personnel ensures against the risk of losing the knowledge base through any individual loss of **education/technical experience** [F17].

> *'I think critical mass is very important. The sooner you kind of actually attain some sort of critical mass and maintain that the better. Otherwise, you're very susceptible to change. For example if one person leaves, you're lost, so the aim really was to build up the critical mass as quickly as possible. For us, when you've got round about half a dozen people you've got something like a critical mass.'*
> (CcLEFJ, p.43)

Once again, the Research Director draws upon his prior experience and is clearly aware of the instability and change brought about through his own departure from Rushton. He seeks to remain in control of his new environment and develops contingency plans in order that provision for research contracts and research students remain secure. Indeed, such a move recognises the combination of pressure for experienced researchers in the sector and the **industry experience** [F16] of staff within the Centre.

### 7.3.3 'A COMPLEX SITUATION'

However, the departure of the original Dean, with whom Fred had established a common research agenda (13), marks a period of reflection as the success in the 1996 RAE (18) (achieving a national research standing) is threatened by a change of objectives within the School. A new Dean's 'mission', no longer remains synonymous with the Centre's aims and a period of instability results.

> *'The situation got quite complex...you know I came and joined a particular Dean who had a similar view to me about where things were going in Art and Design…I came because I thought there was a team who would actually help me to develop this interest that I had within the context of Art and Design…the Assistant Dean retired and the new Dean that was appointed didn't really see the Centre for Design Research as a big element within the School. You know he didn't really have the same vision, he had a different mission if you like, quite a different mission to what we had and we basically operated largely independent of the School…then a third Dean appeared on the scene and again, actually things had been quite tense*'
> (CcLEFJ, p.23)

### 7.3.4 'WHEN PUSH COMES TO SHOVE'

The Dean's appointment places a new pressure upon resources (17) and teaching is identified as the fundamental priority within the School's plans over and above research. From a position of support as an **investment stakeholder** [F24] for the **research policy** [F6], the Research Director is placed in a 'tense' situation by the Dean (20) in which he is forced to compete for **resource access** [F22] to maintain the Centre's development (19).

> *'if you go down to the School level, you need the Dean's support…When push comes to shove within Institutions which are largely teaching Institutions, the Research Centre will actually be the one that suffers. So it is very important the research activity is seen as being something which is centrally supported…For a period we had the Dean's support…and that was very helpful in the early stages, but after that the Dean's activity was either destructive or indifferent.'*
> (CcLEFJ, p.34)

Driven by the surge for student numbers in the mid nineteen nineties (see Chapter 4, University context) the strategic importance of the Research Centre becomes detached from teaching (21) as the institution itself becomes increasingly teaching focused (16).

> '*I think it is very unwise to actually hive off the research activity and say 'OK this is the research activity and this is the teaching activity'. I think you have to think about it holistically. I think you have to think about where is the School going, what is it's overall mission and where does research fit into that so that it is not a separate entity, that you actually think about things holistically. It doesn't work otherwise'*
> (CcLEFJ, p.55)

It is clear that the Research Director believes in the interaction of research and teaching to aid learning. Although his original motivation upon appointment had been to develop a research culture to enhance teaching, he is forced into a position of isolation by a new Dean's **strategic vision** [F2] due to the Centre's **partnership/dependency** [F27] at departmental level.

## 7.4 ANALYSIS: DEVELOPMENT

### 7.4.1 'COMMITMENT'

The Research Centre Director feels let down by a change in **research policy** [F6] and is not willing to relinquish his position as the prime **innovator/initiator** [F1] for the Research Centre's direction. He is able to draw upon his **management experience** [F13] to recognise that whilst support would not be forthcoming within the School, the Centre remained central to the Vice Chancellor's desire to improve overall University research performance (23).

> *'all along the line really, the most important thing in determining whether something is successful or not, is that there is Institutional support first of all. Now throughout all of that kind of uncertainty, one thing that didn't waver was the Vice Chancellor's commitment to the Centre for Design Research as a Research Centre. Recognising that it had researchers who had a significant track record, were internationally known and so on, and offered one of the areas within which research within the University could actually develop. You can translate that down to whatever level but obviously if you have got the Institutional support for it then that is wonderful.'*
> (CcLEFJ, p.32-33)

In order to regain control, the Research Director negotiates with the Vice Chancellor – who maintains responsibility for HEI **research policy** [F6] – for the Centre to become a Research Institute (24) and therefore a separate unit with its own resource base. This arrangement places responsibility for the Research Centre and its activities beyond the authority of the Dean and is recognition of the University as **investment stakeholder** [F24] for quality related research output (27).

> *'At the end of this year – last year – we had the opportunity to enhance what we were actually doing. We appointed a guy who we had actually worked with in the past. We appointed him and we brought in somebody else from Buxton and we basically persuaded the Institution to actually create, to formalise us as a Research Institute…The Centre for Design Research will then operate as a component within the Institute...So, we are now an independent unit. We are quite separate from any School. We're not a part of a School at all and we're a separate cost centre and basically our aim is to function as a research-led Institute. Basically that means conducting research but it also means working with Industry and it also means*

*training both Industry, new engineers, new designers and so on and those are the main objectives.'*
(CcLEFJ, p.26)

The chance to develop the Research Centre into a Research Institute enables the Research Director to retain his authority over **regulatory controls** [F33] concerning research in the University. His role as **innovator/initiator** [F1] is re-affirmed and he is able to capitalise upon **industrial input** [F26] through training and research activities. This period of prolonged instability – over two years – confirms the Research Director's ability to **bear uncertainty** [F4] when the Centre's dependance [F27] on resources at departmental level is not sustainable.

### 7.4.2 'INCOME BASE'

In addition to the industry focus for research and training, the emphasis upon a 'separate cost centre' has added a desire to achieve financial autonomy for the Centre. The Centre uses **diversification strategies** [F32] to establish a post-graduate course (22) as a 'feeder' toward research degrees – achieving recurrent teaching income and progression to research degree registration.

*'We did create a masters degree partly as a way of actually creating a base for Ph.D students but also because it provided us with an income base, generated trained individuals who would go out in the Institute and develop the field, and that in itself would generate links with companies. There is a multitude of factors and really you are trying to make all the conflicting factors balance out.'*
(CcSIFJ, p.12)

Whilst the development of the post-graduate programme would act as a catalyst for the development of high quality researchers it would also appear to be a highly pragmatic and business led decision, based upon an understanding of **client handling** [F31] and the need to make a contribution to **overhead costs** [F23]. Equally, the Centre has had to respond directly to the relatively poor reputation of Middleton for research across the University (see Chapter 4, University context) with a vigorous promotion (25) and **marketing plan** [F29].

Recruitment trips to the Far East – where there is high **demand** [F34] for UK postgraduate education – are used to promote an **image and reputation** [F30] of an independent centre of excellence for design research and colour imaging with an international reputation for research.

> *'We're an odd group of scientists at the mental Hospital…the problem is that we were shackled to Middleton and Middleton hadn't got a very good reputation but maybe that's a good part of being a separate institute so that you can leave them off...I'd like to think that we were seen as professional offering the best to our students and providing good quality tuition…That's part of marketing that we go abroad to Japan and Taiwan.'*
> (CcSIHT, p.149)

### 7.4.3 'SHAPE AND STRUCTURE'

The 'shape and structure' of the Centre becomes focused upon maintaining income streams and a 'management board' provides more **time for planning** [F7] to record and represent the interests of research student, research staff, research funders and technical support staff. A detailed **business plan** [F5] and **pricing policy** [F12] is evident and research leaders have clear procedures in accordance with **financial systems** [F9] which are recorded in reports to the Vice Chancellor (26).

> *'I didn't really have a clear sense, I don't think, of what is the right structure and all that kind of thing but over the last year, in a way, it has become easier for us to think about it because we are in charge of all our finances now so we have to finance everything. We don't just get £50,000 or something to do some research, we have got eight research staff actually I suppose, we have got three support staff and we have got 20 odd Ph.D students, full-time, part-time…We are trying to balance it all out, you know 30% from external grants, 30% from Masters courses, 15% from post-graduate Research students, that kind of thing so that we have, overall, got the right kind of balance for the development of the Institute.'*
> (CcLEFJ, p.53)

Further key research staff [F15] are now appointed (28) using the Research Director's professional networks (29). **Training and development** [F14] becomes a strategic priority to ensure appropriate supervision and Visiting Professors add additional knowledge, kudos and

**outside advice** [F8]. Equally, the Research Director has used his links to policy [F25] to create a portfolio of activities that ameliorate the extent to which the Centre is dependant upon any one funding stream (30), thus aiding the Centre's **ability to publish** [F36] in a number of research fields.

> *'We had a plan which did cover five years so it was a plan which was about really consolidating the position that we had got to…We were at the point where really we were developing, we had x number of key researchers and really we were trying to build up the pyramid under that which would support those and the areas that we're actually engaged in. I think probably two or three years down the line the next step would have been 'well here we are' where we have still got to continue growing as a Centre, you need to keep changing so when you got to that point you'd basically have filled out the potential that existed in the leaders which is what it is all about.'*
> (CcSIFJ, p.38)[92]

A balance of funding and activities has been established (33) around a sustainable 'critical mass' of researchers to guard against the sector's **competition for staff** [F35], and research fields evolve in accordance with the prevailing market – **industrial development** [F39] and **economic conditions** [F37].

> *'Colour and imaging is definitely growing because of the impact on new technology across the world. In terms of design research, in terms of competitiveness and a greater understanding and awareness of the design processes is always necessary…There is a market for that because the world is about design and then there is the art practitioner side of it as well which is going to be an expanding area…so I think we are in an expanding area and also we're offering distance learning courses as well.'*
> (CcSIHT, p.188)

The Research Director is the ultimate means by which **quality control** [F18] is assured and monthly meetings are employed to ensure formal **communication systems** [F20] provide regular contact points with increased staff numbers. However, whilst it is clear in the Senior Researcher's account that he is held in high regard, the political 'gamesmanship' evident in the Research Centres development has led to comments of poor **information sharing** [F19] (CcSIHT, p.103) by staff.

The Research Centre has retained its original purpose with the Vice Chancellor reasserting its role as a key component in the University research effort (32) and the Research Director remains the central decision making figure for its strategic direction. The Research Director has fought for and retained his autonomy (34) by using his personal networks to maintain senior management support whilst keeping abreast of funding opportunities (31).

[92] Past tense used due to the Research Director's recent move to another University where the interview took place.

## 7.5 Conclusions

The Vice Chancellor's role in Case C is critical to the origination of the Centre for Design Research and the continued senior management support through a prolonged period of conflicting agendas at departmental level. A gap in research degree capability was identified as a major obstacle to the former Polytechnic achieving University status and the appointment of staff with a 'track record' in research became a priority. The Research Director's appointment and subsequent promotion to Research Director for the University is recognised by the Vice Chancellor as the catalyst for the development of research degree provision and therefore a significant contribution toward organisational performance.

The Research Director's extensive experience of having previously established a Research Centre with his former Ph.D supervisor, provides him with managerial skills, leadership authority and a highly developed sense of political and strategic awareness. The adroit ability to draw upon this background and experience proves to be a significant factor in the continued development of the Centre during key periods of internal conflict within the University. At all times the Research Director would appear to remain confident of his ability to enhance University research output. His recognition of 'research' as a commodity which is 'brought' to Middleton exemplifies entrepreneurial qualities and strategic awareness of an imbalance in research performance across the sector – demand for high quality research output against a limited supply of adequately 'credentialised' researchers.

Yet, the appointment of a new Dean and the pressure for resources in a predominantly teaching institution (see Chapter 4, University context) threatens the Research Centre's existence in the School. Paradoxically, the market pressures that enabled the Research Director to command such a position – a Polytechnic striving to achieve University status – has an adverse effect on the resources available for research activities. Here, the Research Director utilises his experience and demonstrates clear micro-political skills of tact, gamesmanship and strategic positioning to attract University resources from the centre as opposed to the local level. He is able to manoeuvre a position of line management beyond the Dean by establishing the Centre as a Research Institute and enlists the key support of the Vice Chancellor to achieve increased resource investment to sustain growth.

Research Institute status necessitates a clearer market focus to contribute to operational costs (CcSIFJ, p.109). The Research Director's strategy to develop an increasingly separate identity to the University would appear to have significantly enhanced the Centre's image as an

independent centre of research excellence – in response to the poor overall research performance of the University (CcSIHT, p.214).

Therefore, the Research Director's role in the development of the Research Centre in Case C is pivotal. His leadership is enhanced by a strong empathy with the researchers own sense of autonomy and desire to engage in meaningful research (CcSIFJ, p.27). A bond of loyalty is evident with many of the Centre's researchers moving from one University to another under his research leadership (CcSIHT, p.9). Indeed, it would appear that his ability to outmanoeuvre the Dean, has strengthened the researcher's loyalty to the Research Director as the central proponent in their careers, above and beyond the University.

Whilst the Research Director is reticent about the conflict of 'missions' with successive Deans (CcLEFJ, p.55), it also highlights the dilemma of a Dean having to respond to a major increase in student numbers during the early to mid nineteen nineties (see Chapter 4, University Context). From a departmental perspective, the Centre becomes a drain on resources, both in staff and financial investment, that cannot be justified (CcSIFJ, p.132).

The Research Director in Case C could be viewed at a departmental level as a 'maverick', adroit in the manipulation of his working environment in the pursuit of his own research objectives. Yet, when viewed from the macro-level he demonstrates a strong desire to succeed and his intrapreneurial aptitude to maintain the Centre's development, may well have been widely respected by the wider research community.

# Chapter 8: Case D

## 8.1 Summary of the approach

The Dean of Faculty, Research Director and Senior Researcher from the Research Centre in Case D were asked to provide an autobiographical account of the set-up and development of the Centre from conception to current state. In addition, the Research Director and the Researcher were also interviewed using a semi-structured interview protocol derived from the *framework* of factors (see Chapter 2, Literature Review).

### 8.1.1 Interpreting the causal connection diagram

Figure 8.1.1.1 overleaf provides a synthesis of the evidence drawn from Case D. It plots the history of the Research Centre from the point of origination (nodes 1-2) with the appointment of a Head of School with a mandate to improve its subject performance, to a position of sustainability (32-35), when the Centre represents the faculty within the University research community. The boundaries between the development of the Research Centre drawn from the timeline on the left of the diagram (which includes the factors in play as derived from the *framework* of factors) and the development of nodes to explain the patterns of causality on the right, are intentionally blurred to mirror the dynamic and complex interplay within the case.

Each node is numbered to provide a cross-referencing mechanism during the empirical discussion in the rest of the thesis. For example (11) will refer to the node where the Centre's methodological approach to research student supervision is brought into question by the University Research Committee. Likewise, the reference codes in the analysis that follows (such as CdLEBP, p.11) refers the reader to the transcript and the paragraph within the interviewee's narrative from which the pattern of causality emerged.

## CAUSAL CONNECTION DIAGRAM: CASE D

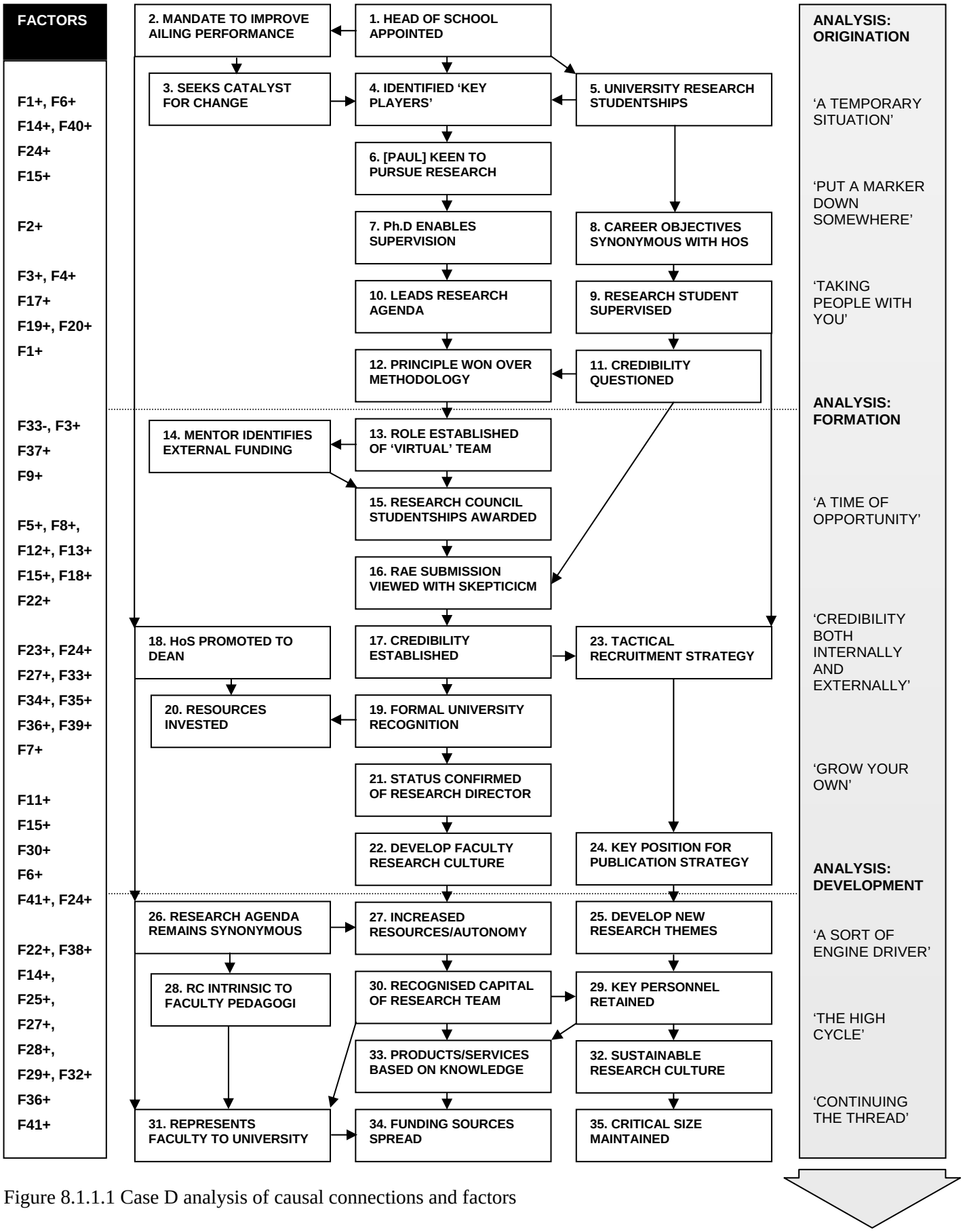


Figure 8.1.1.1 Case D analysis of causal connections and factors

## 8.2 ANALYSIS: ORIGINATION

| *CASE D* | *Director* | *Research Centre activity* | *University* | *Established* | *RAE rating* | *Staff* |
|---|---|---|---|---|---|---|
| **Art & Design Research Centre** | Paul | Interactive Design, Research Methodologies, Visual Arts | Bainbridge (small former Polytechnic) | 1992 | 3 - 1992<br><br>3a - 1996 (National excellence) | Between 10-15 |

Table 8.2.1 Overview of Case D

### 8.2.1 'A TEMPORARY SITUATION'

The appointment of the Head of School (HoS) at a time of some instability and uncertainty within the faculty marked a critical event in the development of Case D (1). A review was undertaken by the new Head of School (who subsequently became Dean during the development of the Research Centre), which included an evaluation of the academic portfolio and staff expertise.

> *'I came here in 1987, by the end of 87 and I had a very clear remit of what the Institute, which preceded the University, wanted the School to be and that was to be an integrated school and also to try and build up the school which has fallen a bit foul of various mandates, particularly CNAA so we were in a temporary situation'*
> (CdLEBP, p.13)

University senior management saw the Art and Design school as disparate and un-coordinated in the management of its business. At a key stage in which the University was seeking to develop its research capability, the School (later to become a faculty) saw an opportunity to pursue the **HEI research policy** [F6]. The HoS, 'anxious' (CdLEBP, p.11) not to fall foul of his new mandate (2, 3), sought to identify and then motivate 'key' members of staff to commence a change in the faculty's ailing fortunes. Largely through his commitment to **training and development** [F14], the HoS saw the potential of the present Research Director (Paul) as a key member of staff [F15], with the ability to act as a catalyst for change (4).

*'Paul was still working on the final stages of his Ph.D and I made it quite clear that I would encourage him and I was quite anxious that we started to move into, whether it was research with a big R but it was much more into a structured approach to research.'*
(CdLEBP, p.11)

The HoS's support is matched by the Research Director's sense of opportunism and strategic awareness at a time when resources are being deployed by the University to pursue the research agenda (5) – through research studentships funded as a result of regional **economic conditions** [F37]. Keen to demonstrate newly acquired research credentials and the **desire to succeed** [F3] in his career (7, 8), Paul is eager to pursue the research agenda (6).

*'Well I think we have got to go back ten years and so in 1988 we first took on a Research Student and that really came about for a number of reasons. One reason was that the University wanted to prime research in all areas of activity and so some money was available internally, just a little studentship, nothing fantastic, but that kind of coincided with myself…completing Ph.D work. So we were in a position for the first time to actually supervise mostly from within the discipline but not entirely and we still needed some assistance and expertise and experience from colleagues in other parts of the University but you know we had a kernel there of enthusiasm and possibility.'*
(CdLEPW, p.9)

The newly qualified research leader has **strategic vision** [F2] and demonstrates many personal leadership attributes that have accord with the informal staff team now surrounding him. At an informal level, the research leader is seen as the prime **innovator/initiator** [F1] of research initiatives and a common sense of commitment and dedication to research is evident in those around him (10).

*'you know, in some cases Paul has through sheer force of personality, made sure that it works. I mean the Ph.D students for example, I mean he has supervised several now and I think without his help and personality they wouldn't dream of not finishing. I think that is a kind of attitude of mind that you set people'*
(CdSIMS, p.36)

### 8.2.2 ‘PUT A MARKER DOWN SOMEWHERE’

Supervision becomes Paul’s primary focus but problems emerge due to the ‘practice based’ methodology to Art and Design research which runs contrary to existing University **regulatory controls** [F33]. This period marks a critical point in the research leaders leadership credentials as the supervisory skills derived through his Ph.D qualification are brought into question (11) by the research committee.

> *‘it was incredibly difficult to get going. You know, our University operates a system where you've got to go through quite a rigorous procedure for registration. I'm sure that's the same in most places. It took us months and months and months and months to actually clarify what it was, how we were going to do it and convince people that this was a viable thing to do…but any rate we jumped in to see where you get to and hope you don't drown. So after that initial struggle it took a couple of years but in that time we brought on another couple of research students so we had a little sort of growing core and we were still getting all sorts of problems from the University in terms of what are these guys doing. They've got no credibility and right enough we were starting off from scratch. So you've got to start somewhere and you've got to put a marker down somewhere and eventually we did gain credibility and they could see that what we were doing was viable and realistic and methodologically sound and it looked like interesting research’*
> (CdLEPW, p.11)

A critical stage of verification and recognition for Art and Design research methodologies follows. It is also apparent in this account that the research leader, as a practising artist, has a degree of professional pride and credibility which underlies a philosophical point of principle. The satisfaction at challenging the conventional academic wisdom and ability to convince peers becomes apparent and provides an insight into the Research Director’s personality.

The importance of affirming the integrity of research ‘through’ practice in a School of Art and Design staff, cannot be under estimated and must have reflected favourably upon the research leader’s standing amongst colleagues (12). Indeed, the research leader’s powers of persuasion and perseverance are evident in the committee’s acceptance of the methodology employed during the process of research degree registration. This demonstrates a strong **desire to succeed** [F3] and it provided the methodological starting point from which the Research Centre was to form.

Trust and respect are implicit in the terms used to describe Paul's leadership and the **management skills** [F13] demonstrated are highly regarded within the Dean and Researcher accounts of the period. There is a sense of admiration within the research community and in the ability to undertake **risk and uncertainty** [F4] in respect of his own professional credibility as an Art and Design practitioner.

> *'I think a great deal of it is about taking risks, you know, some things we are not quite sure about but we'll give a try anyway and what the hell! If it fails well then we'll learn something from it. If it works well that's good, it could be transferable in lots of ways'*
> (CdLEPW, p.13-15)

Nonetheless, Paul's role has clear mutual career interest with both the HoS and the staff around him (8). The HoS is keen to utilise the research agenda to stimulate improved pedagogic standards within the department, and lecturing staff are encouraged to improve their qualifications and standing in the field. Therefore, the purpose of this activity appears not to be solely centred around itself as a separate entity but, a shared resource for reflective practitioners within the department as a whole. In doing so, the Director appears to have imparted a set of values such as openness, fairness and equality of ideas, whilst retaining ultimate control.

> *'I think Paul is certainly the lynchpin of the Centre and is particularly open-minded and will listen to what people wish to do…a lot of the themes that have emerged such as a desire to work in a environmentally friendly way and that sort of thing and to work with the local community, if those things are consistent with what people want to do, people kind of have an idea of what the underlying philosophy is but he [Paul] is ostensibly in overall control for the Research Centre so he'll decide'*
> (CdSIMS, p.13)

### 8.2.3 'TAKING PEOPLE WITH YOU'

Case D highlights strong **synergy with the HEI research policy** [F6] during its origination. There appear to be two causal relationships in play in this respect. Firstly, the HoS was keen to ensure that the research activity provided a research hub to the faculty as a whole in the advancement of research and teaching practice (13) so that research 'capability' could lead to research 'culture'. Secondly, the Research Director was a member of teaching staff who had recently completed his Ph.D and was keen to engage other members of teaching staff in a

shared vision for the research strategy. Therefore, approaches to ensure **information sharing** [F19] across the School are adopted to engage staff generally, over and above the **communication systems** [F20] (such as planning meetings) required within the new research group itself.

> *'We had what we call 'away-days' where everyone gets together and we would brain-storm and crystallise it into some sort of strategy. So we began to do that and to me it was important that everybody was involved. Obviously I had my own ideas about what might happen and colleagues had their ideas and it was important that those ideas were extended and tempered by the greater critical masses in School because I think the key thing there was ownership of the strategy rather than me saying "well we're doing this" and everyone moaning and groaning about it. You've got to take people with you. That's not to say we always agree about everything but it is important that everybody believes passionately in the value of research, obviously to professional development but obviously to underpin teaching and professional awareness'*
> (CdLEPW, p.33)

## 8.3 ANALYSIS: FORMATION

### 8.3.1 ‘A TIME OF OPPORTUNITY’

Buoyed up by the affirmation of the research methodology, the research leader seeks further routes to develop and expand the faculty’s capacity for research. The previous Dean, remains supportive and provides **outside advice** [F8] on funding opportunities. This advice appears critical in the research leader’s decision to break with convention and submit an application for research studentships outside traditional discipline alignment (14) – where there was **demand** [F34] for the staff’s knowledge and expertise. No doubt aware of the political capital to be made within the University research community, five additional research council studentships (15) were secured and the formal nature of the research activity becomes recognised by the wider University research community.

> *‘There then came a number of opportunities and I am afraid the whole period was about opportunities. It was, whether it was terribly planned I don't know, but we made bid for the old EPSRC. It was a shot in the dark and it was part encouraged by the previous Dean who was a great researcher and we won it. It was slightly to our shock but it was also to the shock of the EPSRC who 'phoned up and asked if we had made a mistake – an Art School putting in for an EPSRC which is hilarious but you know, they have always been science based and at this Conference yesterday somebody boasted that they had got a EPSRC grant. Well that's alright we've got lots since. But that's where it started’*
> (CdLEBP, p.9)

Examples such as this imply a strong growth motivation during this early period of Research Centre formation fueled by a desire to credentialise an emergent subject discipline against a backdrop of sectoral change. The reasons behind such a uniform desire to grow appear to be twofold. Firstly, the new HoS can see the potential to improve the School’s track record when the University was gearing up for research. Secondly, the Research Director, saw an opportunity to develop his research interest, based upon his **educational background** [F17], through a movement that encouraged artistic practice.

> *‘There wasn't a strategy then. It was very much a kind of 'let’s have a go' you know we didn't really know what we were doing but thought might as well and it is kind of scary beginnings really. Very dodgy and dithery but if you don't do that you don't get*

*anywhere and I do think it is a case of 'where angels fear to tread' and you know ignorance is an advantage sometimes because you know you apply to EPSRC and other people think you are completely bonkers. Then for some miraculous reason it works and you know you submit to the idea and people think you are bonkers and then they go 'ooh you've got £200,000 quid' so you see it is that kind of risk taking, it all could have come down about our ears but luckily it all came out alright.'*
(CdLEPW, p.49)

### 8.3.2 'CREDIBILITY BOTH INTERNALLY AND EXTERNALLY'

A strong trust based relationship with the new HoS appears to support the Research Director's authority and autonomy as the research capacity develops. It was also timely that the output from the research studentships supported the department's 1992 RAE submission. Yet, this event highlighted the commitment gap between the School's growing research output and the research committee's pre-conceptions of Art and Design as a discipline. The insinuation that the Art and Design submission would reflect poorly on the University, required last minute intervention by the previous Dean to enable the submission to proceed (16).

*'the real watershed came with the first RAE that we engaged in '92 which was a battle with the University that we should be allowed to submit because art was seen as that silly activity which after all the serious work goes on in Pharmacy, Engineering and Science. We won the battle at the last hour, it went forward and we got a 3 and that shocked the University because nobody else got anything. I was immediately transferred from the Head of School job into this job [Dean]. The two don't go hand in hand but it just seemed to be like that. Having done that and gained quite a lot of money, we decided that we would try to create a research unit'*
(CdLEBP, p.9)

The 1992 RAE rating and its subsequent core funding could be regarded as the single most important event in the development of the Research Centre in Case D. All accounts indicate an avalanche of consequential effects across the whole University. The School secured immediate support through University **resource access** [F22] to establish a Research Centre. In addition, it had an instant effect upon the way the University perceived the value of Art and Design research.

Interestingly the Dean is keen to point out that the University **location** [F41] also meant even more resources were forthcoming (CdLEBP, p.13) due to the funding formula applied regionally[93]. It also demonstrates strategic awareness of the value of the School's research output through the peer process adopted by the funding councils [F31].

The funding immediately transformed the School from a liability to a leading research performer in the University (17) – the most important evidence of this being the former HoS account citing it as the major reason for his promotion from the HoS to Dean (18). His investment in the Centre's **partnership/dependency** [F27] was rewarded through his own career progression.

This period also marks the point at which the research group becomes a formalised activity within the University, with the Research Centre gaining the official recognition of furthering national and international standing in the field (19). In this respect, Case D suggests that external recognition by peer review – an **ability to publish** [F36] – was a pre-requisite to 'formal' status by the University of the Research Centre and its Director (21).

> *'we got a 3 and subsequently got something like £200,000 per annum for three or four years and that really enabled us to get going and it also gave us more credibility, both internally and externally and that was incredibly important. People began to say "how did you get that score, how did you do that?" that's why I felt it was terribly rewarding because you could actually give out some ideas to other disciplines and other colleagues. So you felt you did have a research base and it can't be that bad because you've been funded for it and you've got a rating'*
> (CdLEPW, p.21)

### 8.3.3 'GROW YOUR OWN'

Resources and credibility secured, the Research Director and the Dean engage in negotiation of a **business plan** [F5] to secure the further development of the Centre. The **regulatory controls** [F33] concerning monitoring and financial procedures are applied to the Centre in a direct way through the research councils and the RAE. Informal reporting and monitoring procedures become standardised through **project management** [F11] systems which meet the

[93] RAE Submissions are co-ordinated and assessed uniformly through the funding councils for England, Scotland, Wales and Northern Ireland but funding distribution is determined within the particular funding council's discretion.

requirements of new **investment stakeholders** [F24]. Equally, the Centre's **resource access** [F22] leads to a corresponding increase in research outputs (20), and **quality control** [F18] remains at the forefront of the Research Centre Director's concerns as the ultimate arbiter of standards.

> *'I think Paul is an essential quality control thing. I mean there is a great deal of pressure to try and get things out of the door. It is absolutely essential that nothing leaves unless it is of the highest standard and we all check each others work and Paul is very good at that, he is excellent.'*
> (CdSIMS, p.30)

Roles and responsibilities of new research posts are clarified and the Research Director appears to have a 'free rein' to recruit new research staff after agreement of a human resource strategy which balances the development of existing personnel with investment in new posts (23). New appointments (24) act as catalysts for the publication and dissemination of ongoing research activity whilst existing research staff pursue new research themes.

> *'we wanted as many people in School involved with them so we started to encourage the breadth of supervisory teams to engage people within the School…we had to be structured in this way because we got RAE money…and we wanted to ring fence it so that it didn't get confused with the teaching and Paul started to manage that. He brought in people like Rachel Brown...and others, and we deliberately decided that we wanted a core of research studentships – all that were practice-based and that, really, is the thrust of the whole research and it relates to what the core is…So it really grew from that, since then it has grown like Topsy a little bit. It is controlled, it is very much integrated because we are different to other institutions. We decided not to get a policy of going out and buy stars, Paul's view was that we have some quality people here and we could grow our own…It irritated some especially if they'd gone out with their big cheque books. But it really was that how could we make the most of the staff we've got and we are always bringing in new staff and it was something special. So Paul has been growing his own and he's grown quite a team'*
> (CdLEBP, p.9)

The approach adopted remains in accordance with the Dean's concern that research should be seen to be integrated within the School to the benefit of teaching and learning strategies (22). A *'grow your own'* (CdLEBP, p.9) strategy is pursued to **attract/retain staff** [F15] from within the University against increasing competition for qualified research staff [F35]

nationally. In addition, more time is committed to planning [F7], such as fortnightly planning and faculty research sub group meetings (CdSIMS, p.69), to maintain communication and participation.

This process of change also indicates that the responsibility and autonomy of the Research Director's position within the University is seen to grow simultaneously with the ability to attract studentships, grants, research contracts and external finances (27). In addition, the specific role within one of the new posts to develop an internal **pricing policy** [F12] toward research funding, is a clear signal to maintain and sustain core income for the long-term.

> *'We decided to make the most of the money, invest it wisely if you like and one of the first things we did was to employ a couple of key people in very strategic roles. One was a Research Fellow, post doctoral research for Art and Design and the other role was something we made up because it didn't exist and that was what we first of all called a Public Output Co-ordinator – you know what is that? Well what it was in fact, was someone who could assist members of staff here and researchers to actually get their work out. Most practitioners here would have art work exhibitions or design products or whatever but we felt we needed a bit more strategy on that and somebody who could kind of liaise with staff to develop what is now called a publication strategy. The role has now evolved into something that is a bit clearer but absolutely central'* (CdLEPW, p.22)

## 8.4 ANALYSIS: DEVELOPMENT

### 8.4.1 'A SORT OF ENGINE DRIVER'

Case D highlights that the strategic direction of the Research Centre and indeed the Research Director's career, remains entirely congruous with the faculty and its staff (26) for which it sees itself fulfilling the role of research *'engine driver'* (CdSIPW, p.42). The School remains the major **investment stakeholder** [F24] to develop staff and to maintain quality-related research output. At an early stage a bridge is built between professional development within the faculty and work is undertaken to further reflective methodologies in Art and Design research (28). This helps research culture to develop over and above the original research capability and enables the Director to have **policy influence** [F25] within the University research committees. In addition, the Research Director maintains strong trust based relationships within the faculty and appears to engender loyalty through sensitive management of staff development and career progression issues (29). This trust and respect seems to be reciprocal bearing in mind the levels of staff [F15] retained within the School (all the original research leaders have been employed since 1988).

> *'I think if you do accept the idea that a Research Centre is a sort of engine driver or catalyst or enabler or facilitating body, then you know, I think it is an important part of the institution's energy if you like. Obviously underpinning courses as well as performing in a kind of RAE sense and gaining funding. So although we do operate in a slightly different way, there are other centres of research in the University that are self-funding…It is difficult, you know, to actually see yourself as a kind of self-funded centre and I don't necessarily think that is always the right way. There is some danger in that of being perceived as a separated centre that is not embedded in a School or relates to other Faculty centres…but there are kind of bridging things like, for instance, Faculty research subgroup for whom I am the convenor…so we do share events, seminars, where design is the umbrella'*
> (CdLEPW, p.42)

Yet, bearing in mind the Research Director has played a key role in two successful RAE submissions, which would have dramatically enhanced his own personal capital and that of his colleagues (30), there remains an unwillingness to contemplate 'self-funded' status to maintain **resource access** [F22]. Whilst this could be considered an inability to undertake risk at this stage in his career and a continued **dependency** [F27] on the faculty, this would ignore

the underlying relationship that has evolved, which could be difficult to sustain due to fluctuations in economic or public funding conditions. Therefore, **overhead costs** [F23] continue to be borne by the School to reduce the Centre's operating expenses.

### 8.4.2 'THE HIGH CYCLE'

The reference to future plans being governed partly by the *'high cycle'* (CdSIMS, p.40) highlights the importance played to research policy across the University. This is affirmed by the Research Director's position as conveyor of the faculty's research sub-group (31) to attain a level of **synergy with HEI research policy** [F6] and the need to be consistent with it (CdSIPW, p.45). It would also appear that the Research Director sees the University research network as an opportunity to gain **outside advice** [F8] on how the Centre's research strategy aligns to the HEI as a whole.

> *'the University has a research strategy and you know, we have got to be consistent with that. I don't have any problem with that really because we are part of it, you know, we are consulted on it and we can have some ownership of it. Externally, I think it is very important that you know what your colleagues are doing in other institutions and how they're conducting research, what kind of structures and mechanisms they might have. I mean I think that is just part of keeping a professional awareness of what is going on and how your centre relates to it… you can't have a isolated vision, you can't have, you know, so singular a vision that you know it doesn't connect with anything else because if you don't connect now you're dead'*
> (CdSIPW, p.45)

Furthermore, the Research Director is obviously keen to derive best practice in a professional sense from his use of **HEI networks** [F28] both within the University and outside. As the senior researcher put it: *'he usually seeks advice from others'* (CdSIMS, p.13) and the appointment of the retired academic as honorary research fellow to provide advice and guidance on the Centre's development would support the approach of the Director as a reflective and contemplative leader (CdSIMS, p.9).

### 8.4.3 ‘CONTINUING THE THREAD’

The Research Director determines the research agenda at faculty level and the Centre’s research philosophy permeates through to the faculty's research work. Indeed, the Centre is absolutely synonymous with the faculty’s research strategy. The original motivation to legitimise a methodological approach to University peers has sustained a culture of research through practice at faculty level (32).

Responsibilities within the Centre are delegated to project leaders who have budgetary authority for financial monitoring with administrative support to maintain central **financial systems/information** [F9] (CdSIMS, p.59). ‘Clusters’ have formed around themes such as environmental design and other **societal issues** [F38], to develop emerging research areas (25) around the interests of supervisors and their research students [F14].

> *‘The critical mass kind of expanded a bit more, we began to take on Research Assistants, in some cases to directly develop Ph.D work that had been completed so we were kind of trying to continue the thread. Not have a project finish and that's it but continue it on in some way through the sustainability of a research theme and that was important and at that point you could begin to see that yes, we were interested in a couple or three obvious clusters of research. One was definitely a technological one, that's where we got the EPSRC money, we were interested in new technology. Interested in multi-media and the second theme is interested in environmental or safer practices, sustainable practices and the third theme which myself and the research fellows have been working on was really the articulation of research methodologies… Those are key themes that we work to although we'd never turn away an exciting proposal that was off theme, I think that is quite important’*
> (CdLEPW, p.31)

Methodologies surrounding practice led research have become the Centre’s core knowledge and **diversification strategies** [F32] have been employed to create new courses (33) in response to **demand for expertise** [F34]. A new Research Masters Course, written by the Senior Research Fellow interviewed, marks a shift to a more market focused operation in response to long-term concern over the **ability to publish** [F36].

*'we decided to start work on a new course called a Research Masters Course…What people wanted essentially was distance learning, they liked the idea of the course, they like the idea of the curriculum but they weren't prepared to come to Bainbridge…the Principal was very, very, keen on distance learning…so an open and distance learning centre has been established at the campus…so luckily for us they have decided that we are going to be one of the main elements'*
(CdSIMS, p.9)

The Research Director is aware that the Centre needs to become less reliant on core 'quality related' funding through the RAE and Research Council grants, which are subject to changing **public funding strategies** [F40]. Interestingly, commercial opportunities (34) are seen as an opportunity beyond the control of the Centre itself, and an issue for the University as a whole. The Director senses an area of weakness here but appears unable to comprehend how product development could translate into a **marketing plan** [F29], building upon the Centre's growing **image and reputation** [F30].

*'the commercialisation of what we do is not terribly well developed if at all but that is an issue for the University…there is a kind of strategic thing now that needs to be worked out. We can't just suddenly do it ourselves but I am aware that there is a lot of development in that area needed and a lot of hard work because I think we do come up with some interesting products here and processes and methodologies and they do need marketing. You know, you can do a limited amount yourself but in a way until somebody like large company adopts a more sustainable design methodology in their packaging then you know, we could be shouting about that all day but if somebody does it, then others might be interested'*
(CdSIPW, p.112)

Aside from further development opportunities, the Centre is currently suffering the consequences of growth. With over seventeen research students and staff, the Director talks about the Centre *'reaching a kind of critical size'* (35). He is keen not to lose the group 'dynamic' when seeking to **attract/motivate staff** [F15] and there is reticence, if not an unwillingness, to delegate further control in the future.

*'I think we are reaching a kind of critical size. A small enough group to need to know, want to know what is going on, what projects are progressing, how they are progressing and about people. Are they happy? Are they progressing? Do they have*

*any problems? You know, I think that is one of my roles but then there are certain projects where I have absolute trust in project leaders who are working at senior research fellow level or research fellow level and which, you know, give them responsibility and trust in their judgments… I do think we're getting to the edge of the coherent body of people and um, you know, we might get to the stage where you've, you know, got to kind of have sub-teams, if you like…We have already got delegated responsibilities for various projects and I think that works quite well. People know what they're responsible for and to whom but I can see that if there is anymore sort of growth, you know, you might sort of re-organise the way we manage things'*
(CdSIPW, p.26-38)

## 8.5 Conclusions

The appointment of the HoS to the School of Art and Design in Case D marks a significant change in strategy toward research, which is in line with the remit of his appointment (CdLEBP, p.13). He identifies a key member of staff to co-ordinate research activity in the School, who is equally keen to develop his career by capitalising upon a recently completed research degree.

Mutual objectives and career aspirations between the Head of School and the Research Director are established and met through the development of the Research Centre. The HoS and the Director display clear 'entrepreneurial' qualities early on in their careers to redeem a gap in organisational performance. The HoS demonstrates strategic awareness to nurture the intrapreneurial nature of the Research Director (CdLEBP, p.11) and the Director recognises the need to achieve external recognition through the peer review process of the RAE, to qualify his research leadership and to inspire others to undertake research.

The 1992 RAE was timely for the informal research team to demonstrate its research capability and the way in which the submission was made, against a background of University scepticism for Art and Design research, propelled the Director to the forefront of the University research community. The Director's credentials are clearly enhanced during this period, amongst University colleagues and research peers. It also appears to have played a significant part in the HoS's promotion to Dean of the faculty and therefore, both are rewarded for the funding secured and the enhanced research reputation to the School.

Throughout the development of Case D, the Director maintains a strong synergy between teaching staff and the Centre's activities. Yet, the Director has attained increasing autonomy and control within the University. The Research Director's personality is offered as a key factor in ensuring that autonomy has been tempered with the ability to maintain active engagement with the School's research community. The *'grow your own'* philosophy has reflected well upon the Director and has enabled staff to become *'very good researchers'* (CdSIMS, p.208).

Continuation strategies for emergent research themes based around research degrees and an enviable location (an area of outstanding natural beauty) have also combined to retain key staff. All the original staff involved in the Centre's origination have remained within the faculty, although, it was also reported by the Dean that flexible interpretation of personnel

policies had been adopted in some instances when staff had been approached by other Universities (CdLEBP, p.49).

Critical factors influencing the development of Case D have clearly changed as the Centre has evolved. For example the HoS's appointment stimulated a chain of events which led to the 'virtual' team of researchers becoming formalised and the RAE submission coinciding with the EPSRC research studentships. However, the Research Centre Director is a central figure throughout the development of the Centre both within the University but also within an emerging subject field. His personal capital has been dramatically enhanced by the research output from the Centre and it is not surprising that he places the highest value on the esteem of his peers outside the University. The impact he has made upon the individuals within the Centre and the faculty supports the view of the senior researcher who reported he was successful through *'sheer force of personality'* (CdSIMS, p.36), with inherent leadership qualities to instil loyalty, trust and confidence.

Evidently the Research Director feels that management is about 'leading by example' and the professional risk taking during the early set-up phase achieved much personal admiration and kudos. Underlying these qualities would appear to be a strong locus of control, which is non-negotiable (CdSIMS, p.13). The Director is the final arbiter of quality and decision making over new research initiatives, but the respect for his judgment and ability to produce high quality research, has created a strong empathy with the research community (CdLEBP, p.9).

# Chapter 9: Case E

## 9.1 Summary of the approach

The former Dean, Research Director and Senior Researcher from the Research Centre in Case E were asked to provide an autobiographical account of the set-up and development of the centre from conception to current state. In addition, the Research Director and the Researcher were also interviewed using a semi-structured interview protocol derived from the *framework* of factors (see Chapter 2, Literature Review).

### 9.1.1 Interpreting the causal connection diagram

Figure 9.1.1.1 overleaf provides a synthesis of the evidence drawn from the Case E. It plots the history of the Research Centre from the point of origination (nodes 1-2), when a new Dean's research agenda encouraged research group formation (node 11), to the current position of restructuring research activity into RAE units of assessment (node 35). The boundaries between the development of the Research Centre drawn from the timeline on the left of the diagram (which includes the factors in play as derived from the *framework* of factors) and the development of nodes to explain the patterns of causality on the right, are intentionally blurred to mirror the dynamic and complex interplay within the case.

Each node is numbered to provide a cross-referencing mechanism during the empirical discussion in the rest of the thesis. For example (11) will refer to the node where a subject leader develops cross-faculty links to pursue new product development consultancy with regional medical companies. Likewise, the reference codes in the analysis that follows (such as CeLEMO, p.11) refer the reader to the transcript and the paragraph within the interviewee's narrative from which the pattern of causality emerged.

## CAUSAL CONNECTION DIAGRAM: CASE E

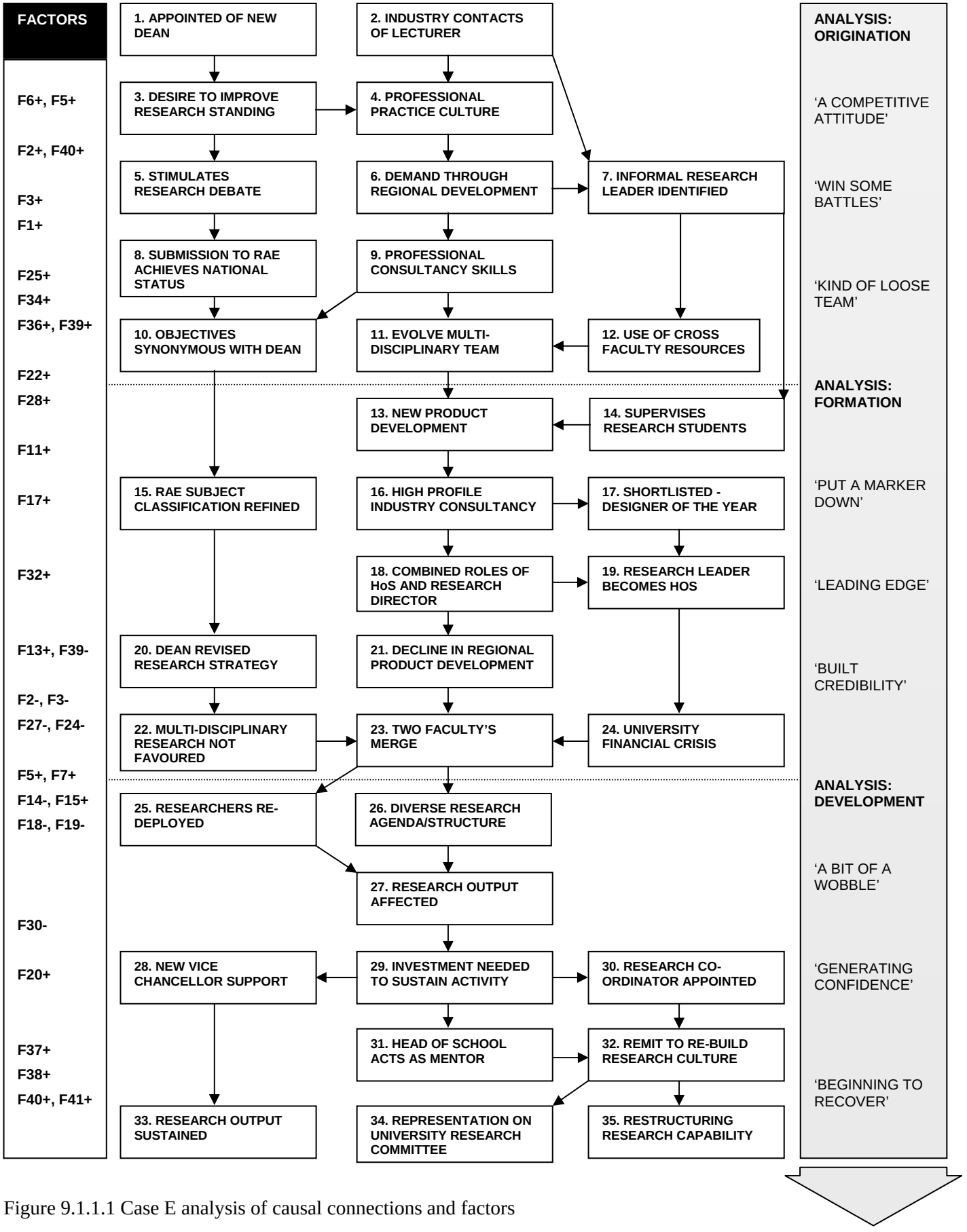


Figure 9.1.1.1 Case E analysis of causal connections and factors

## 9.2 ANALYSIS: ORIGINATION

| CASE E | Director | Research Centre activity | University | Established | RAE rating | Staff |
|---|---|---|---|---|---|---|
| **Art & Design Research Unit** | Martin | Information Design, Interactive Design, Industrial Design, Visual Arts | Claremont (former large Polytechnic) | 1988 | 1992 – 3<br><br>1996 – 4 (International excellence) | Between 10-15 |

Table 9.2.1 Overview of Case E

### 9.2.1 'A COMPETITIVE ATTITUDE'

The appointment of a new Dean in 1990, (1) heightened the relationship between professional practice and lecturing (4) within the Faculty of Art and Design as the faculty sought to improve its research performance (3). This followed the former Dean's achievement in the 1988 research assessment submission[94].

> *'During the 1980's we began to grow much more of a research culture in the sense of beginning to realise that our work was important, and acknowledged. But to be fair we all had a policy, certainly in Fine Art anyway, a competitive attitude to working and exhibiting…In the late 1980's, I was Head of Department from 1986 to 1989, and was aware in that time of a Research Assessment Exercise, but none of us had participated until then…Tom pulled it all together for our faculty…and we got a 3. In 1990 I became Dean of Art and Design. I knew there was another exercise coming up in 1992, and this became number one on my agenda. I did a lot of things quite quickly.*
> (CeLELP, p.10-11)

Establishing a research culture became an immediate priority for the Dean who was keen to establish her credentials after promotion to senior management from Head of Department. Lecturing staff were encouraged to practice and promote their work through consultancy and exhibitions and an informal group of lecturers in the School of Design had established links

[94] Art and Design became eligible within the RAE through its own Unit of Assessment in 1992. Previously the subject had been subsumed within other broader Units of Assessment within the humanities.

with local industry (2), as significant investment in the region brought many manufacturing companies into the locality (see University context, Chapter 4).

> *'Far East companies came and set up based on our expertise and of course it evolved nice and calmly. It was very stressful of course, but the whole idea of changing an individual practitioner, showing one's own work and that transition period over a time when there was no Product Design in the area at all, was probably a turning point.'*
> (CeLEMO, p.11)

This environment encouraged (7) a lecturer with 3 dimensional design skills to use his **industry experience** [F16] and undertake product design consultancy for a growing number of manufacturing companies. Martin balances his lecturing responsibilities with new product development work (6, 9) in response to both an external **demand for expertise** [F34], created through an upsurge in **industrial development** [F39], and an internal pressure to demonstrate skills and expertise through professional practice.

### 9.2.2 'WIN SOME BATTLES'

However, the strategy of research through professional practice appeared to run contrary to the rest of the University research community (5), who had begun to establish central administrative procedures to measure research. The traditional academic, non-vocational disciplines had brought about mechanisms which discriminated against the public forms of output envisaged by the Dean.

> *'We had expressed quite a lot of anxiety and concern because during the late 1980's the University had started putting in place measurements for research within the Institution – various research committees, and started looking annually at what we did. The paperwork was predominately orientated towards publications and text-based output, and of course that was what the rest of the University did. I had to win some battles very quickly – I felt I needed to. I went to a meeting very early on in the University and argued the case for my faculty doing it in a different way, presenting its public output itself on its own terms, using its own pro-forma, and using its own terminology.'*
> (CeLELP, p.11)

Mechanisms are negotiated with the Research Committee to quantify research output through professional practice in accordance with the Dean's **business plan** [F5] to make a submission to the 1992 RAE. The Dean demonstrates **strategic vision** [F2] to challenge current research conventions in a discipline newly recognised for its research output and this was to spark a wider debate amongst faculty staff. These issues were timely as the national debate concerning Art and Design research methodology began to advance and enabled the faculty's practitioners to influence **policy making** [F25] and an emerging **public funding policy** [F40] toward the arts and humanities.

> *'In the early days we had Lin Parry as our Dean and Lin was very shrewd, intelligent in relation to reading the signs and we hopefully gave her enough room for her to manoeuvre at a national level so that she was able to articulate what Art and Design research could be across the whole range. She led a very active debate within our Faculty… It needs that sort of underpinning, intellectual testing of the value but we would be very diminished if that was 'all' we were doing, being learned scholars about design. That is the debate and the dilemma still'*
> (CeLEMO, p.11)

### 9.2.3 'KIND OF LOOSE TEAM'

Spurred on by the strong leadership of the Dean and the recognition the faculty was receiving for its work through reflective practice, Martin pursues the opportunity to develop collaborative work with industry (9) through **HEI networks** [F28] within the faculty of engineering.

> *'Some years later through different changes I became involved with a set of engineers well outside of Art and Design but within the institution and they were looking at the whole area of cardiology and they discovered that I had certain practical skills, so we joined up as a kind of loose team and we started quite an interesting pathway of discovery in relation to the whole area of resuscitation…we started to develop the first portable defibrilators in the world. That grew and our reputation'*
> (CeLEMO, p.10)

The skills ‘pooled’ within the multi-disciplinary team (11) enables the emerging research leader to develop new products (13) for medical companies drawing upon the **resource access** [22] within the engineering faculty (12). His aptitude as an **innovator/initiative** [F1] in drawing together expertise outside of the faculty enables the imbalance between the **demand** [F34] for design services and the lack of regional provision, to be realised.

## 9.3 ANALYSIS: FORMATION

### 9.3.1 ‘PUT A MARKER DOWN’

The group’s research leader is aware during this period of development that the discipline of Art and Design research was not seen as a priority within the University as a whole. His multi-disciplinary approach is therefore pragmatic and by drawing upon the **technical background** [F17] of the engineering faculty, his own reputation is enhanced without the need for investment by the faculty.

> *‘We thought we ought to make a statement and put a marker down because in a large institution Art and Design is never one of the key areas. Engineering and the sciences are because that's where government funding comes from…So how do we operate then and where can we find our funding?…One is to become so good in your own right that funding will follow in whatever way or an earlier stage which is where we are at, is to join 'the coat tails' of some of the other players rather than stand outside the door and shout 'we're equal' which doesn't get you too far…That means that out of the early bridge building through working with engineers…grew some more skills that maybe we didn't have or didn't think we had’*
> (CeLEMO, p.14)

Equally, the ‘competitive attitude’ which had created a culture of public output, appears to have instilled an inter-faculty rivalry between the Art and the Design Schools and indeed, the professional pride of the researchers within them. In contrast, the cross faculty relationship that formed the basis of the Design Research Centre (later to become the Art and Design Research Unit) was of a non-competitive and mutually beneficial nature.

This **desire to succeed** [F3] in this new environment of research quantification is recognised through the formation of the Research Centre and designation of Research Centre Director.

> *‘The Design Research Centre was formed with about six of us who were in the practice of design in some way. Up until then the Fine Art practice had it all their own way, you had good exhibitions and people recognised those and a catalogue was produced, some others were writing books and there we were busy doing what we thought was pretty good stuff. People were saying "that sounds alright" and then*

*moving the subject on. It really came out of a reaction as opposed to anything else, an internal reaction really, making a mark. We were no more clever than that.'*
(CeLEMO, p.19)

### 9.3.2 'LEADING EDGE'

Product development research and consultancy begins to develop a momentum of its own as the recognition of the products produced leads to an increasing awareness and demand for the Centre's services. At the same time, **project management** [F11] systems were established in negotiation with the University research office due to the profile and economic value of the contracts undertaken (16).

*'We started to get some of the defribulators into very strange places like the Gulf during the Gulf War, into Wembley for the last World Cup and so on. They even appeared on two versions of Neighbours in Australia and they appeared in a film, so we were making public across a very wide field…at the leading edge…So here we were being seen because of the character of the product in the end. It was being chosen by Film Directors for its appearance, not for its capability and that was quite interesting. We ended up as well getting people like Siemens to phone us up and do defibrulators for them and then'*
(CeLEMO, p.11)

However, success in achieving notoriety for the product aesthetic began to have problems of replication and the focus of the research began to encompass issues of intellectual copyright and technology transfer. These areas were developed further through the enrolment of research students (14) and the development of Teaching Company Schemes.

*'we had the great difficulty of trying to design something that didn't carry over the inherent integrity of the products we were designing for someone else. Now there, you start to find wonderful barriers in research that you have to come to terms with. All of the patents, all of the copyright, all of those legal areas, we took a spin in another learning curve.'*
(CeLEMO, p.12)

Martin establishes a track record for innovative design work in the field of medical product development and his contribution is confirmed at national level when short listed for the

award of Designer of the Year (17). His contribution to the Dean's strategy to achieve an enhanced rating in the RAE is rewarded with promotion to Head of School (HoS) (19). Inevitably this position necessitates an increased amount of **time for planning** [F7] but the new HoS still undertakes the role of Research Director for the Centre (18). Thus, **synergy with HEI research policy** [F6] is ensured through the combination of roles, and it enables the research base of the Centre to be strengthened by attracting key staff [F15] through the appointment of a Professor in Design Management.

> *'Parallel with that I became the Head of one of the Schools within the old faculty of Art and Design and it was titled Industrial Design which we were very proud of. We liked that as a title and we took on board some other people. We got a Professor and he brought with him Design Management skills which again paralleled our Design making skills, so things went from better to even better.'*
> (CeLEMO, p.11)

### 9.3.3 'BUILT CREDIBILITY'

Multi-disciplinary work demonstrates a willingness to pursue **diversification strategies** [F32] and the introduction of Teaching Company Schemes requires joint supervision by engineering and design management staff. Interestingly, this also demonstrates how the Research Director equates the credibility of his own subject discipline, through the peer review of colleagues from other domains.

> *'Spin out of all of that is that once you build credibility with other colleagues outside of your own domain you then can start to have Teaching Company Schemes…art and design at this stage has six ongoing and has completed five. So we are definitely on the road'.*
> (CeLEMO, p.15)

The development of Teaching Company Schemes as an alternative source of **public funding** [F40] to the RAE provides the Centre with a direct link between industry projects and the ability to harvest research outcomes. In addition, the ability to receive direct income[95] by spreading funding sources had become even more important due to a decline in product

[95] Teaching Company Schemes are Government funded to support knowledge transfer between industry and universities. Each scheme typically provides a budget (around £98K over 2 years) for

design and product development consultancy (21), as **industrial development** [F39] in the region began to decline.

> *'So, out of that we stopped doing defibrillators. The Far East companies got so big here that they actually decided that it wasn't even economical to stay here in the country and they took their production across to the sea to an even larger area.'*
> (CeLEMO, p.12)

This period in the Centre's development – between the 1992 and 1996 RAE – led to a revised strategy toward interdisciplinary research (20). Whilst the University had encouraged complementary expertise in multi-disciplinary teams, the Dean had recognised that this caused difficulties with ownership of the subject assessment classification (15) and crucially, it was seen as a loss of her own power and authority.

> *'Claremont made a mistake like a lot of other people did – it created a lot of interdisciplinary centres, thinking that that was the strategy. They suffered terribly because they were stuck between faculties – and Deans were very powerful but felt threatened by anything which undermined that power – the only interdisciplinary centre we were involved in was to do with engineering…Apart from that we were almost exclusively Art and Design so I didn't have the problem other Deans had, in that the faculty coincided exactly with the unit of assessment. You had the power and could manage the process internally.'*
> (CeLELP, p.15)

employment of an associate to undertake a project whilst under supervision by an academic member of staff.

## 9.4 ANALYSIS: DEVELOPMENT

### 9.4.1 'A BIT OF A WOBBLE'

In 1996, the Faculty of Art and Design improved its research performance in the RAE, achieving a national to international research rating. The Design Research Centre had contributed to this achievement but the interdisciplinary work with researchers in the faculty of engineering was no longer seen as beneficial to the Dean's research strategy (22). However, the re-appraisal of the Centre's role was to be foreshadowed by a financial crisis within the University (24) that was to have profound effects.

The potential closure of the Art and Design campus appears to have been openly considered by a Vice-Chancellor when the University was subject to financial penalties due to over recruitment against student numbers. The Senior Researcher reported that: '*The last Vice-Chancellor didn't have a good word to say and wanted to close our campus down'* (CeSIHT, p.136) and the lack of senior management support was further exacerbated by the Dean's move to another University. In a move designed to cut costs, the Humanities and Art and Design faculties merged.

> *'the University decided that we were going to become a school within the University as opposed to a Faculty. We would have a new Dean…and they advertised the post. I still held on to the Research.'*
> (CeLEMO, p.23)

During these changes the HoS sought to retain control of the research activity within the School and proposed new sub-groups to re-focus research staff within a larger Art and Design Research Unit (25). Yet, the **desire to succeed** [F3] with the management of the Unit and the responsibilities of the HoS appear to have been in conflict. The original Design Research Centre was in effect disbanded, and the threatened closure of the Art and Design campus is used by the Vice Chancellor as a driver for change. Ultimately the Unit's **partnership/dependancy** [F27] on University investment necessitates a research structure determined by the University rather than by the faculty.

> *'I think we went through quite a wobble about two or so years ago and certainly for a little while we hadn't a handle on the different practices and at that stage I chaired and led one meeting per week that lasted about three hours but it had to be done. We*

*put ourselves into sub-groups, still within the Research Unit, still all looking towards the same corporate goal and I put staff names against that and then suggested that was where they ought to be. So that's how we manage ourselves.'*
(CeLEMO, p.23)

The unification of the two research communities is further complicated due to the rivalry between the Schools that existed prior to the merger (26). For example the HoS's account highlights the difficulty of **quality control** [F18] over visual arts research output that can only be assessed through external exhibition. In addition, the dispersed location of researchers appears to have created problems of **information sharing** [F19].

The HoS has to draw upon his **management experience** [F13] and aware of the criticisms that may be leveled against his own research background by subject leaders in different fields, reacts by emphasising his support for arts based research practice.

*'I've had to wear an entirely different hat of course because I have taken on that role, I find it odd talking about design as I've stopped doing that over this past few years in a way that I talk about Art and Design and all the different ramifications and I'm trying to be more than supportive to the whole area of Fine Art Practice as well and we've been building that even stronger so that as we go forward, we're going forward with the best shot.'*
(CeLEMO, p.19)

The result of the enforcement of an overall University **strategic vision** [F2] for research, appears to have had a direct effect upon staff morale. This is particularly apparent in the design research community, with a consequential effect upon research output (27) and a lack of confidence in promoting a coherent external image and awareness [F30].

*'The Design staff were struggling more than the Fine Art staff because they didn't fit in as comfortably. Though in each exercise we submitted graphic illustration, booklets, leaflets – every kind of design thing you can think of – as long as there was some reference to the public dissemination and the client.'*
(CeLELP, p.15)

### 9.4.2 'GENERATING CONFIDENCE'

After this period of instability, a review of research infrastructure (29) is undertaken and University commitment to Art and Design research as the main **investment stakeholder** [F24] is reaffirmed. A Research Co-ordinator (30) is appointed within the Unit to ensure delivery of the research strategy. Whilst this appointment immediately enhances the engagement and **training and development** [F14] of research active staff, it highlights the conflict of roles encountered by the HoS, which is seen as hindering the Unit's development.

> *'I can only really go back to the time when we got that 4. That was then followed by a good year or two of hiatus – and that was a real problem. Now that I'm in place, and it's not the Head of school doing it, they can talk to me in confidence…they can see me running around, being very active – it's generating confidence.'*
> (CeSIDU, p.211)

The HoS is keenly aware of 'old perceptions and prejudices' which act as barriers to his authority and control and this is reflected in his **business plan** [F5] and sensitivity toward promotion of the Unit's knowledge and expertise. Staff appear sceptical of changes forced upon them and the HoS's management style is accordingly tentative and 'softly, softly'.

> *'We've got ourselves for the very first time this year as Art and Design a management structure that I hope will evolve into a genuine management of Art and Design. It needs a couple more years for it to settle and break down some of the old perceptions and prejudices that were there. We have held back and it will be about another year before we put a decent web site together.'*
> (CeLEMO, p.17)

### 9.4.3 'BEGINNING TO RECOVER'

The loss of the former Dean is clearly of significance to the Research Co-ordinator to whom she places much of the credit for the ability to encourage research output [F36] for the RAE. In addition, there is clear recognition that the HoS was put in a compromising situation due his managerial role and the complex personnel tensions created through the unification of the research communities. The remit of the Research Co-ordinator is clear, to rebuild the culture of research within the School (32), enhance **communication systems** [F20], and aid research capability within the Unit (35).

> *'It was thanks to our last Dean that we got a 4 and the way in which she managed that. Since then, we've had structural problems because of the re-structuring of the school faculty and so on, having a hiatus where we had no real leader as a Research Unit, I think we're beginning to recover from that. I'm getting some very positive responses. People from Art and Design are coming to me and being really appreciative. The way in which the University has responded to us – giving us new posts and so on – that was instigated by the Vice-Chancellor. I've just been nominated to the Research Committee'*
> (CeSIDU, p.208)

This role is further supported with the appointment of a new Vice Chancellor (28) who funds additional research posts to sustain faculty research output (33) and acts as a senior management 'champion'. Research administration and **training and development** [F14] are co-ordinated across the University through a central research office. Representation on the University Research Committee also ensures the Research Co-ordinator has the opportunity to inform policy affecting Art and Design research (34). The HoS now uses his role as Director of Research in the School to offer advice and guidance to the Research Co-ordinator (31) who has taken over the day-to-day responsibility for the Art and Design Research Unit.

> *'I headed up the research area for three years as a holding job, I put a structure and strategy in place there to manage the Research Unit, so the new structure has basically been in place now for a year and a bit…So we're in that transition period…We're OK. If we hadn't gone through all the transition, we would be a little further on but it would be fractional. We're only basically as good as we are today on the table and we wouldn't be much better given any other circumstances.'*
> (CeLEMO, p.21-24)

The new devolved structure and co-ordination for research becomes embedded within the faculty and whilst the HoS plays down the turmoil created by changes forced upon him, he is aware of 'lost ground'. Indeed, this must be even more frustrating when one considers the Unit's **location** [F41], in an area of high economic regeneration due to the region's **societal issues** [F38] and long-standing cultural problems (see Chapter 4: Introduction to the case studies).

## 9.5 Conclusions

The promotion of a Head of School to the position of Dean for the Faculty of Art and Design created a ‘competitive attitude’ (CeLELP, p.10) toward research output during the period prior to the 1992 RAE. An active debate (CeLELP, p.12) in the faculty, led by the Dean, increased the level of awareness for the research aganda and the development of Art and Design practice within the faculty.

Professional practice had always been undertaken by lecturing staff at Claremont but the increased impetus of a new Dean, keen to enhance her own standing in the field, provided the basis for research active staff in the School of Design to collaborate with local industry. Therefore, the original Design Research Centre was formed from an informal staff initiative in response to regional demand (CeLEMO, p.10).

Case E demonstrates the Research Director’s strategic awareness when growth in regional manufacturing companies created a shortfall in new product development knowledge and skills. In this respect, the Research Director’s behavior could be described as displaying ‘entrepreneurial’ qualities by recognising and satisfying a gap in the market. Indeed, resources within the engineering faculty are clearly redeployed in order for the multi-disciplinary team to secure contracts with industry.

Mutual objectives are therefore met – the Research Director gaining recognition of the work through design practice and the Dean achieving research output in readiness for the RAE. The Research Director’s contribution to the faculty’s research performance is rewarded through promotion to Head of School (HoS). Yet this position, combined with his existing role, proves to be a compromise when the University has a financial crisis after the 1996 RAE. The lack of commitment to Art and Design by the Vice Chancellor and the subsequent merger of the Faculty’s of Humanities and Art and Design meant that the HoS became associated with reduced investment and support for research.

The HoS became responsible for both the art and the design Schools and research staff were re-deployed through a new University structure into Research Units. The former rivalry between the Schools, led to tensions in research agendas between the two research communities. These events resulted in a period of instability and inertia, due largely to a University intervention that had little sensitivity to existing research culture or capability. The separate identities of research activity within the Art and Design Schools appear to have been lost and their value within the wider research community diminished. The HoS ultimately has

to relinquish his overall control of research in the School as University systems to standardise research co-ordination and administration processes are centralised, through a research office with personnel policies driven by the Vice Chancellor.

The subsequent lack of research output – only 20% of research opportunities available to the Unit were taken up (CeSIMO, p.180) – appears to have been masked by a wealth of funding available to the University within the region as a whole (CeSIDU, p.196). Therefore, the Unit's locality has played a significant part in research activity being maintained during the Unit's 'period of transition', from a dedicated research team to a broad and devolved structure in which individual researchers make informal collaborations based upon their own interests.

Case E also shows that critical factors in the development of the Research Unit have changed over time. For example, the Dean's appointment stimulated an environment in which research active staff thrived upon inter-faculty rivalry which spurred staff to pursue multidisciplinary research with the Faculty of Engineering (CeLEMO, p.19). However, this rivalry was to prove disruptive to the unification of the Art and Design research communities during merger. Equally, the industrial design skills of the Research Director, so valuable to the Centre's origination, would appear to have become a barrier to the engagement of arts based research staff in his position as HoS (ibid).

If viewed from the position of the University, the HoS has ultimately achieved the delicate merger of two Faculties which has been of benefit to his own career progression (CeLEMO, p.19). However, if viewed from the wider Art and Design research community, the 'entrepreneurial' qualities and leadership aptitude that initiated the Centre's early work, have been compromised by responsibilities forced upon him due to the senior management role.

In addition, the loss of the Dean to another institution, who was evidently admired for her *'shrewd and intelligent reading of the signs'* (CeLEMO, p.11) may have inadvertently acted as a catalyst for change from which the School is only just emerging.

# Chapter 10: Cross case analysis

## 10.1 Introduction

The objectives of this chapter are twofold. Firstly, sectoral differences between cases within the broad classification of Art and Design research will be considered, and the effect upon leadership style, management structure, operational systems and processes. Secondly, cross case patterns of phenomena will be explored through *axial concepts* to represent cause and effect relationships over time. As Eisenhardt (1989) recognised, this stage marks the point at which: *'tentative themes, concepts, and possible relationships between variables begin to emerge'* (p.541).

The following Chapter will lead to a discussion of the interaction between *axial concepts* and factors within the amended *framework* to explain the combined influence upon Research Centre development. In addition, the literature pertaining to each of the *axial concepts*, and the factors that relate to them, will be reviewed.

## 10.2 Commonality and divergence between cases

### 10.2.1 Knowledge production

| *Activity* | *CASE A* | *CASE B* | *CASE C* | *CASE D* | *CASE E* |
|---|---|---|---|---|---|
| **Computer Aided Design** | X | X | X | | |
| **Digital Imaging** | | | X | | |
| **Industrial Design** | X | X | | | X |
| **Interactive Design** | | X | X | X | X |
| **New Product Development** | X | X | | | X |
| **Research Methodologies** | | | | X | |
| **Visual Arts** | | | | X | X |

Table 10.2.1.1 Primary research activities by case

The analysis indicates alternative management and co-ordination structures between cases with different research orientations. The 'design' and the 'arts' orientated subject disciplines had divergent working practices – the design fields tended to work in cross disciplinary teams (Case A, B and C), whereas the visual arts practitioners sought to work independently except for collaboration through joint exhibitions (evident in Case D and E). Therefore, the production of research in the two subject fields is essentially diverse. The visual arts practitioners often sought to develop their own personal practice on an individual basis and the design fields worked collaboratively in multidisciplinary teams on industry related projects.

For the design orientated Research Centres, knowledge becomes a key market asset (as described by Harvey *et al.*, 2002), promoted through 'tangible' case studies with industry, and for the visual arts subject fields knowledge becomes subjective and seemingly 'intangible', reinterpreted by the public that receives it.

In many ways the former can be likened to the work of Gibbons *et al.* (1994) which suggests that the production of knowledge is becoming increasingly focused toward the solution of specific problems through teams at the expense of the individual researchers interests. Gibbons *et al.* (ibid) argue that a new production of 'cross-disciplinary' knowledge is emerging – termed Mode 2 – which is distinct from the more traditionally based and linear

disciplinary frameworks – Mode 1. Clark (1998) has proposed that this is a characteristic of 'entrepreneurial' Universities.

Chapter 4 has already demonstrated that the Research Centres in Case A, B and C operate with a 'near market' focus. In many ways their management structures and working practices used to co-ordinate and facilitate knowledge production, are similar to the Consultancy model. Teams are brought together with multi-disciplinary expertise, such as engineering, design and management, to solve client problems.

Robertson and Hammersley (2000) found that consultancies wanted knowledge workers to develop their own knowledge – by sharing their own expertise and learning from others – in order to satisfy client demands and to be part of what was termed the 'cultural fit' of the organisation.

> *'Thus project team working was not hindered by consultants jealously guarding their personal knowledge and expertise...Valuable organisational knowledge and skills were thus retained within the firm over time…Expert consultants were selected on the basis of their cultural fit…Cultural fit implied a willingness and ability to share knowledge and…which allowed them to work with others from different specialisms and further develop and enhance their own intellectual capital.'*
> (Robertson and Hammersley, 2000, p.251)

In contrast, the notion of a 'market' was an entirely different proposition for the primarily 'arts' orientated research staff (Case D and E). They did not conceive their activity as functioning within a 'market'[96] and saw themselves operating within a wider social environment independent of competitive forces. The arts practitioners would commonly relate to the traditional humanities conception of research to inform cultural enrichment for the general good of society. This quotation from the Research Co-ordinator in Case E illustrates this point and highlights the tension between Art and Design subject disciplines when they are viewed in commercial and financial terms.

> *'I think we have to be careful, because one of the things I'm seeing is that that the hard edged design – those who are designing dashboards for Mercedes and phone covers for Nokia and so on – they hold obvious kudos as applied Design, whereas someone*

[96] The semi-structured interview protocol question Q.34 asked respondents 'How would you describe the market in which the Centre operated?', as the basis for a discussion about potential 'competitive' forces affecting the Research Centre's development.

*who is doing Performance Arts is in an area with no money in it, you can't sell it – there's no obvious kudos there. I think you have to be incredibly careful in the way in which you present yourself to the rest of the University in that you are talking not only in financial terms. You have to be careful in how you present the Unit as a whole. I want to resist putting us forward as something which is modular, under blanket terminology that is determined by other faculties which have a lot of money. I want to present us as being incredibly diverse in our practices and in the way that we affect other people's lives.'*
(CeSIDU, p.224)

It is argued that this study found evidence of Mode 2 knowledge production in the near-market Research Centres studied. The use of multi-disciplinary teams to solve the specific knowledge requirements of clients was evident in the majority of cases where knowledge transfer activities were undertaken. Much of this activity has resulted from Government intervention in a variety of forms through 3rd stream funding to facilitate research with industry. The research also indicates that the 'near market' Centres are drawing on a diverse range of subject disciplines such as management, engineering, and ergonomics and consumer psychology to undertake new product development. Much of this development has been stimulated through European Union regional development investment into manufacturing industry.

Kogan (1998) rightly points out that the origins of Gibbons *et al.* (ibid) lies in the earlier work of Trist (1974) who makes a key distinction between disciplines and domains of knowledge:

*'Disciplines are hard won formulations of sequences of concepts and evidence which are reiteratively advanced through testing. By contrast, domains do not start from development within disciplines but from problem areas which may need knowledge from a whole range of disciplines for their solution.'*
(Kogan, 1998, p.11)

Domains tend to refer to professional and industrial groups as a reference point to establish the value of knowledge produced through practice. The 'near market' Research Centres (those engaged in consultancy and knowledge transfer) demonstrate a tendency toward a 'domain' of knowledge which is able to draw upon knowledge from many discipline areas. Indeed, they realise their contribution to knowledge through the use of 'design' as a mechanism to solve real-life problems for clients. Their starting point is a pre-determined acceptance of the market economy as a means to produce new or improved products and services to consumers.

A different situation is evident in the arts orientated Centres which appear to defer only to their own discipline and reserve the right to be sceptical about the value of knowledge that is produced as a result of market forces. They conceive their world as a community of researchers able to benefit society through cultural enrichment. The research indicates that the arts oriented Centres (for example Case D) have sought to control their own 'discipline' and develop their own methodologies in response to self-interest rather than feeling obliged to draw upon more established areas of knowledge from other disciplines.

This stance has also been fueled by many of the debates discussed in Chapter 1, when Art and Design first became eligible for the RAE and leading arts practitioners sought to deflect criticism from other disciplines (for example Gray *et al.*, 1993; Painter, 1994; Everitt, 1993). Clearly, the understanding of Art and Design's role within the wider research community still appears problematic:

> *'I will give you an analogy. People come to us* [within the University research community] *and they say how many hip operations have you done? Ten twenty or thirty? We have to turn round to them and say we don't actually do operations, we are dermatologists. Its as simple as that.'*
> (CaLEJT, p.75)

In summary, this research provides evidence of a divergent approach to knowledge production within the broad field of Art and Design research, but more interestingly, it highlights an opposing set of social and cultural values that underlie the purpose of the research itself.

### 10.2.2 Organisational structure

Eason (1995) has identified four types of organisational structure for Research Centres: the Small Research Group with a common mission and set of values; the Hotel Model with autonomous sections to pursue different research programmes; the Project Structure with centralised management and delegated responsibilities to team leaders; and the Dual Role model with a project management structure as above but with extended corporate development for all staff. Unsurprisingly, the analysis of the organisational structures for the Research Centres' studied in Chapter 4 indicates a high incidence of the Small Research Group model at the formation of the Research Centre. However, Case A, B and C have

evolved many similarities to a combination of the ‘Hotel’ model and ‘Dual Role’ model suggested by Eason.

Strategic direction is negotiated with the Head of Department (Vice Chancellor in Case C) and separate research ‘units’, with internal competition for resources, operate at a local level (similar to the Hotel model). Yet within the Research Centre, policy and corporate development responsibilities are shared between the Research Director, team leaders and research staff, with clearly delineated lines of authority for the development of research output (similar to the Dual model).

One could describe this transparent ‘near market’ structure as a ‘simple hierarchy’ (Mintzberg, 1988) with the Research Director having clear line management control of staff involved with the Centre’s work. But it also echoes elements of Mintzberg’s ‘divisionalised’ model due to the standardisation of knowledge services within teams of specialist expertise. At the same time, researchers have dedicated responsibilities for corporate development in response to client needs at the local level.

The mix of researcher staff with specialist expertise with additional corporate development responsibilities for the Centre’s development provides a simple and flexible management structure under the Research Director’s leadership. This highly focused and responsive model, evident in the design orientated Research Centres, mirrors a professional ‘consultancy’. Indeed, the term research consultancy was reported in many of the semi-structured interviews. Figure 10.2.2.1 below provides a diagrammatic illustration of the ‘Consultancy’ model as demonstrated through Case A, B and C.

Case D and E demonstrate a looser alignment and management structure due to the diversity of research interests – visual arts, interactive design and industrial design. The relationship between the Research Director, research leaders and researchers is informal and mutually constructed (particularly in Case E) and the remit of the Research Centre’s role (policy) is negotiated with the Dean/Head of Department. Figure 10.2.2.2 illustrates a flexible structure which encourages informal interaction of teaching staff with full time research staff.

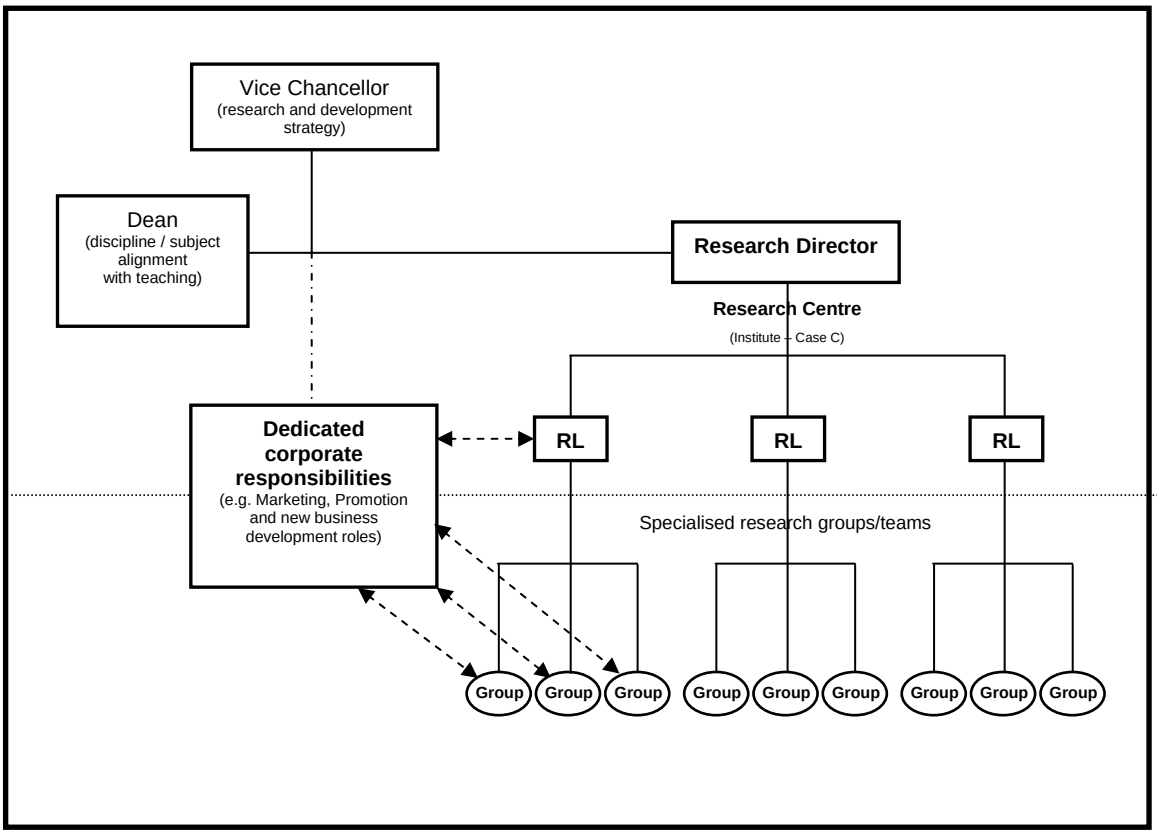


Figure 10.2.2.1 Consultancy model of Research Centre management (amended from Eason's Hotel and Dual Role Models, 1995, p.3)

This approach has similarities to the 'Temporary Project Team' model put forward by Eason where flexible strategies are employed to re-deploy and combine teaching and research roles by drawing upon a wide 'pool' of department staff to augment the capacity of permanent research staff. It also has similarities to Mintzberg's model of 'Adhocracy', with the centre acting as an administrative and development 'hub' to serve individual staff and informal research groups at a local, mutually adjustable level. The Research Director is at the centre of research policy on behalf of the faculty and acts as a supportive conduit to external funding opportunities in a non-hierarchical manner.

The structure places the Research Centre and its Director, at the heart of staff development for higher research degrees, new research group formation, monitoring, and co-ordination of research projects within the department. Yet, the structure purposefully supports the interests and autonomy of the individual research practitioner.

This arrangement could be considered collegial in nature, as group dynamics are based upon mutual benefit and are self-enhancing – for example exhibitions in the visual arts which promote each individual contribution.

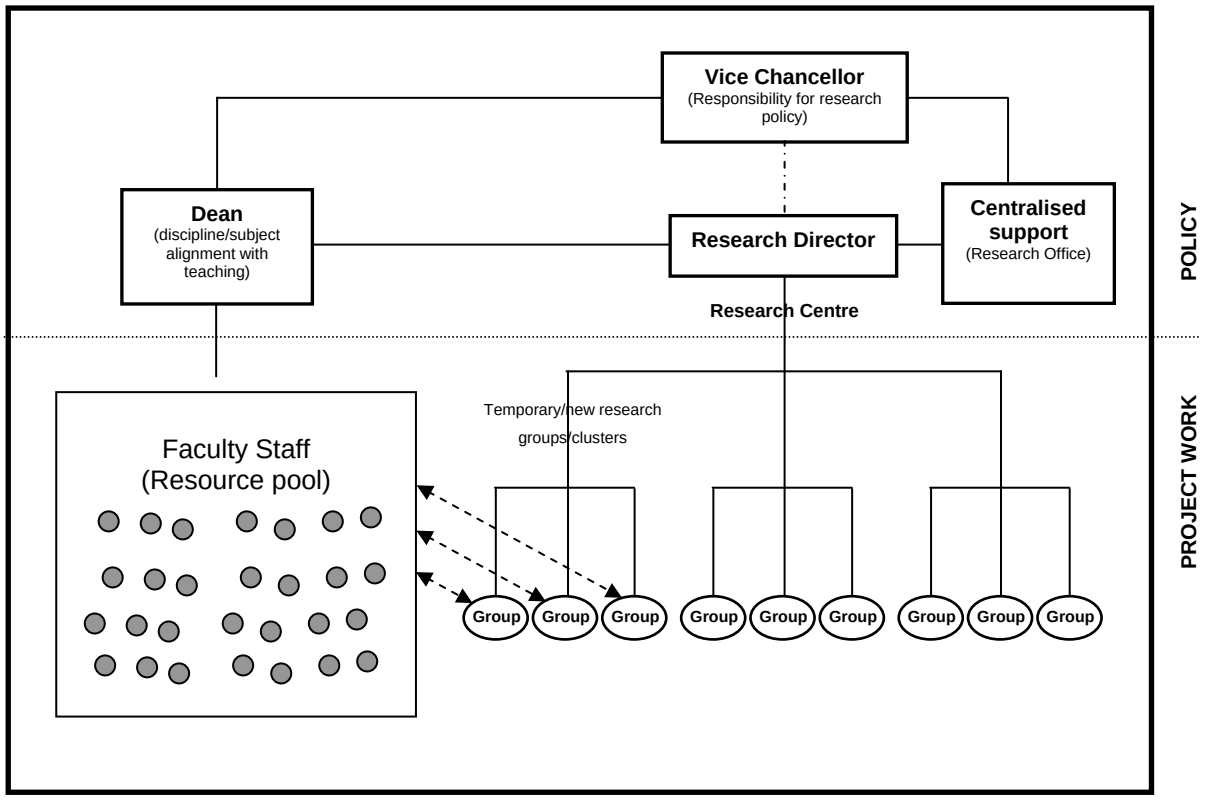


Figure 10.2.2.2 Collegial model of Research Centre management (amended from Eason's Temporary Project Team Model, 1995, p.3)

The two models of Research Centre management, 'Consultancy' and 'Collegial', suggest a diversity of organisational structures, authority and remit for the Art and Design Research Centres studied, relative to a variety of subject contexts. The comparison of organisational structures suggests that the 'arts' (Case D and E) and 'design' (Case A, B and C) Research Centres require differing styles of leadership and management. 'Arts' orientated Research Centres tend to be more collegial and promote the individual's personal and creative endeavour, whereas 'design' Research Centres focus upon knowledge of the multidisciplinary team as a tangible 'market' asset.

A simplistic analysis of the differences in organisational structure might suggest that the 'Consultancy' model illustrated in Figure 10.2.2.1 would provide the most efficient and effective means of research performance in Art and Design departments due to the

predominance of the highest performing RAE departments. However, this assumption would negate the complex analysis of Case A which indicates that the Research Director's lack of autonomy and authority directly affected the ability to retain research talent. In addition, the nature of the research undertaken, availability of resource access, staff capability and experience, and the University research/teaching balance, are all factors that need to be taken into account.

Furthermore, the contextual analysis of the Universities in Chapter 4 suggests that the balance between teaching and research income varies considerably between cases. Figure 10.2.2.3 below shows that Case A has the highest research income which is more than twice the income of the lowest.

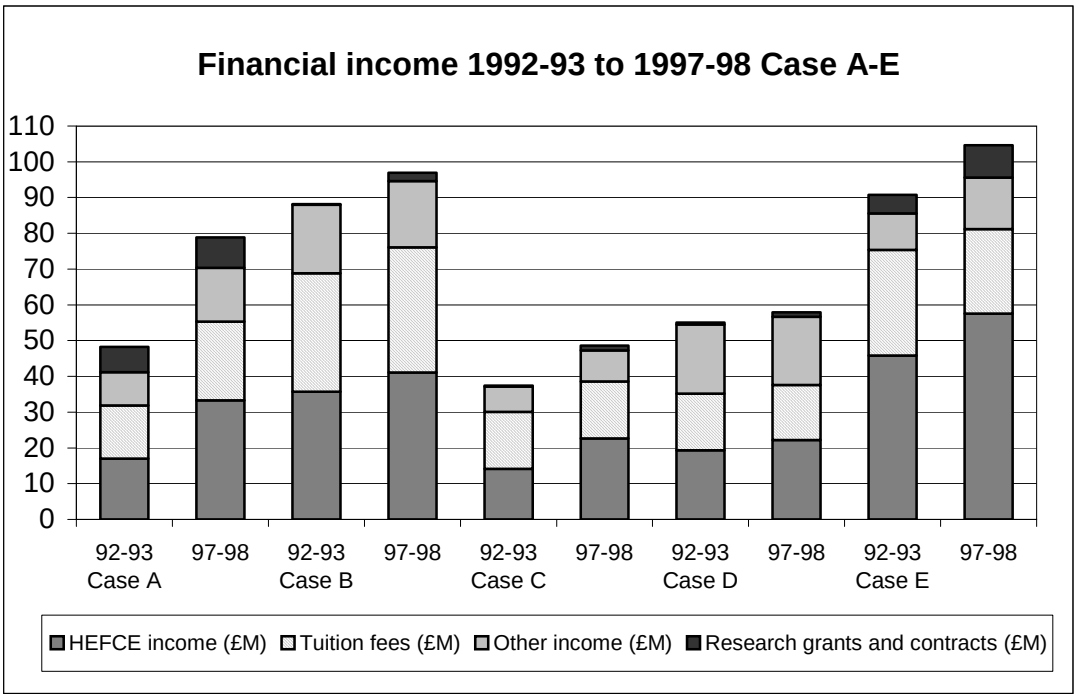


Figure 10.2.2.3 Financial income 1992-93 to 1997-98 by case

This might suggest that some of the Art and Design departments are more established in terms of research culture – the general capability and experience of staff to engage in research and the universal support mechanisms (such as a Research Office and central research funding) afforded to them within the University. Indeed, the propensity of former Polytechnics within the cases[97] reinforces the traditional vocational nature of the Art and Design subject

[97] The specific criteria established to identify the sample frame (Research Centres operating in the upper end of the research performance spectrum) are detailed in Chapter 3.

disciplines and the lack of formalised structures to support research activity prior to the 1992 RAE.

Indeed, compared to the more established research disciplines in the pre-1992 Universities such as those within the sciences, it is possible more established organisational structures would be evident due to the higher levels of investment to support research infrastructure – a point made in the AHRB (2002) report: 'Review of Arts and Humanities Research Funding'. Moreover, the emphasis on building research capability through a concentration of resources during Research Centre formation, might be a transitional state when viewed in the long term as continued success in research funding might change the balance of research and teaching. One could argue that the development of Case C, as a Research Institute, is the ultimate balance of research and teaching activities which is not dissimilar to many traditional 'research led' University departments.

### 10.2.3 Leadership

Handy's four cultures of organisations (1985) might explain some of the leadership characteristics identified within the 'Consultancy' and 'Collegial' typology. The 'Consultancy' model mirrors Handy's 'power culture' with control exercised by the founding Research Director in much the same way as an owner manager. Intrapreneurial aptitude to secure and sustain research income reinforces the Director as a central source of power. In contrast, the 'Collegial' model necessitates a 'person culture', with a minimal administrative structure that becomes subservient to both individuals and informal research 'clusters'. Here, the Research Director needs to maintain a personal profile and ideological bond with staff beyond direct line management control.

Yet, all the Research Directors had many similarities in respect of their leadership responsibilities. Typically, they reported having to: develop a shared strategic vision for the Centre along with operational plans agreed at departmental/faculty level (for the department as a whole in Case B, D and E); implement and monitor management information systems and processes; negotiate resource access and the re-deployment of resources from within the University; generate income and achieve representation on funding bodies; whilst maintaining research standing in the field. The way in which the Research Director in Case B conceives his role is typical of the balance that has to be struck between leadership strategy, income generation and research standing.

*'I think having a clear vision and being able to link that vision to a practical method. A clear idea of how you resource what you are seeking to achieve. Opportunism and good opportunism…successful in attracting research council grants, European funding and British Council grants…we realised from an early stage that for our practice based research to be truly counted for research we needed to be able to report it and reflect on it… our essential difference is to develop knowledge about this process rather than just doing the process and not just earning money from it.'*

(CbLEBP, p.52-53)

However, the nature of the Research Directors' leadership style appeared to be different across cases. Broadly speaking, the Research Directors with arts backgrounds (Case C and D) appeared to be more concerned with their own personal identity and representation. There was a repetition of critical events in their life-elicitation interviews when their authority or credentials had been questioned, as opposed to the more material forms of representation evident in the other cases, such as the procurement of buildings, equipment or other resources. The quotation from the Research Director in Case D is a useful illustration of how a personal conflict to one's authority can reinforce personal standing amongst colleagues and induce a sense of ideological unification for the department's research philosophy around a key member of staff.

*'we prepared a submission for RAE and the first piece of advice that I received from the University was don't bother and I thought 'what have we got to lose, we might as well have a go' and I put together a submission. We got a 3 which was the highest score in the University which absolutely gob-smacked everybody…People began to say "how did you get that score, how did you do that?" that's why I felt it was terribly rewarding because you could actually give out some ideas to other disciplines and other colleagues.'*

(CdLEPW, p.19-21)

In contrast, the Research Directors in Case A, B and E who had more commercially orientated backgrounds, appeared to take greater care over the shared value and group process employed within the research itself – always emphasising 'us' as opposed to 'I' in their life-elicitation

interviews. Of course, this may be explained by the nature of the research subjects undertaken and audiences for the Centre's work rather than the leadership backgrounds alone.

But the arts orientated leaders tended to place less emphasis on research as a collective activity and place more emphasis on the promotion of the individual as the 'artist' within their specific area of practice. Research Centres concentrating on design and new product development (Case A and B), had sophisticated forms of corporate identity and their Directors sought to promote multidisciplinary knowledge and expertise, along with evidence of the commercial service available, quite separately from the University.

> *'One of the things I enjoy doing and get a lot of satisfaction out of is envisaging new areas of development…The other skills are leadership on a daily basis and the ability to excite and motivate the staff to achieve their own potential and the potential and objectives that are set for individual projects. The responsibility to help cascade that down to the department – academic staff and students alike. To use it as a platform to really help people feel proud and excited by the subject itself. The other perhaps less enjoyable parts but nevertheless very important are the more steadying hand bits of management and administration…There are limits to the satisfaction in that but it's a makeup of the job.'*
>
> (CbLEBP, p.88-90)

The text concerning 'charisma' may suggest that the leaders in the subject areas of design which were more commercially orientated, have sought to create material reference to the social identification of the research team (Shamir *et al.*, 1993). Whereas the arts orientated leaders sought to identify themselves through a personal reputation for the unconventional and confrontational – thus engendering trust and purposefulness as described by Conger and Kanungo (1987).

However, Shamir *et al.*'s theory that charismatic leaders are able to engender an increased sense of personal 'intrinsic' reward through self-fulfillment or self-expression over 'extrinsic' reward through holiday or higher remuneration, would appear to concur with the desire of all the Research Directors in this study. Indeed, it can be argued that they had all relinquished the latter for the former within their own careers.

## 10.3 Causality of Research Centre development

Having explored the differences between cases, it is timely to consider commonalities and patterns of causality which are evident cross case. *Axial concepts* are now presented to explain events, happenings and incidents that have materialised through combined data analysis[98]. In doing so, they unify node categories evident in individual cases through a common association of the nature of influence upon Research Centre development over time[99].

*Axial concepts* will form the basis for discussion of the empirically verified *framework* in the following chapter (Figure 11.1.1) but they are introduced in outline here as a theoretical timeline of Research Centre development through: origination, the circumstances surrounding the instigation of the Centre; formation, the formal establishment of the Centre within the University; and development, when pursuing growth and sustainability.

An audit trail is provided to remind the reader of the original context to each concept identified. For example $BTTRR_4$ will relate to the node 'regional demand for expertise' evident in the causal connection diagram in Case B (Figure 5.1.1.1). In total, eight *axial concepts* are put forward and they form the basis of the following sections:

10.4 Origination
- 10.4.1 INTRAPRENEURSHIP
- 10.4.2 CREDENTIALISATION (Qualification & Credibility)
- 10.4.3 OPPORTUNISM (Recognising & Responding to Demand)

10.5 Formation
- 10.5.1 FORMALISATION (Managerial Expertise)
- 10.5.2 CRITICAL MASS (Achieving Optimal Size)

10.6 Development
- 10.6.1 GAMESMANSHIP (Tact & Political Nous)
- 10.6.2 KNOWLEDGE CAPITALISATION
- 10.6.3 NETWORK CONNECTIVITY

[98] It is worth noting that Glaser (1978) originally used the term 'theoretical coding' to describe this process of transition from open and catagorised coding to central theoretical concepts. However, Strauss and Corbin's (1990) terminology is more descriptive in that an 'axis' is formed from which to connect data categories to central concepts, which in turn, are supported by many empirical indicators.
[99] In accordance with Strauss and Corbin (1990, p.96), axial concepts make connections between node categories identified in individual cases whilst recognising the conditions, context and nature of the interactions represented.

## 10.4 Origination

### 10.4.1 INTRAPRENEURSHIP

The narratives in the origination phase highlight an increased emphasis in University strategy toward research due to a gap in organisational performance ($A_{1,2}$, $C_{2,3,4,5,8}$, $D_{1,3,4,5}$, $E_{1,5}$). Deans/Heads of Department associate this period – immediately prior to 1992 – with strong University commitment to an improvement in departmental research output and this results in a clear desire to identify and nurture key staff as catalysts for change leading up to the 1992 RAE (Frayling, 1993). Deans/Heads of Department act as 'career mentors' ($C_6$, $D_{4,6,14}$) and provide advice and guidance ($D_{14}$) to particular staff who are encouraged to pursue the research agenda through the completion of research degrees, supervision of research students and leadership of informal research groups ($B_{3,8,11}$).

The vocational nature of the Art and Design subject disciplines and the commercial focus of many of its courses created a culture of professional practice with local industry ($B_{1,2,4}$, $E_{2,4,6}$) and balanced external demand with internal expertise. Such activity highlighted the 'entrepreneurial' aptitude (CaLEJT, p.10) of emerging research leaders which was nurtured by senior management. The work had potential to demonstrate research outcomes eligible for the RAE whilst enhancing the department's profile by working with well known companies ($A_8$, $B_{3,4}$, $C_5$, $D_6$, $E_6$).

INTRAPRENEURSHIP is therefore evident in two ways. Firstly, the significance of Deans/Heads of Department to nurture intrapreneurial qualities in key staff – the ability to encourage risk taking in their careers by pursuing the research agenda, initiating a change in organisational culture, and negotiating resource access both internally and externally. Secondly, research leaders engendered commitment and loyalty in staff around them, and created a vision and strategy for research in what were primarily teaching orientated departments.

### 10.4.2 CREDENTIALISATION (Qualification & Credibility)

The ability to supervise and recruit research students ($B_{19}$, $C_{9}$, $D_{9}$, $E_{7}$) created a new market opportunity for post-graduate work and research leaders identify strongly with recently acquired research degrees during origination ($B_{10,13}$, $D_{6,7,9}$). Yet, many organisational obstacles appear to have confronted the research leaders in an emerging subject field ($D_{12}$). Here, the ability to challenge the authority of the University research community clearly enhances the research leaders credentials ($A_{5}$, $B_{7}$, $C_{8}$, $D_{10}$, $E_{7}$) and increases the ideological unification of staff who support a practice based approach to Art and Design research ($D_{11,16}$).

This period of origination also reinforces the association of research staff careers with the Research Director's ability to manage the research process and maintain standing in the field. For example, the Research Directors in Case A and C are able to attract former research colleagues to a new University along with research projects and research students. These 'credentials' are almost recounted in terms of a commodity which is 'brought' to the new University.

CREDENTIALISATION is initiated through qualifications which enable research supervision but more importantly, it is reinforced by a track record of successful research project management – the ability to secure research funds, lead research teams, supervise research students and publish research outcomes.

### 10.4.3 OPPORTUNISM (Recognising & Responding to Demand)

The sectoral pressure to improve research performance fueled the development of the Art and Design Research Centres studied ($A_{3,9}$, $B_{18,21}$, $C_{18}$, $D_{14,\ 15,16,17}$, $E_{7,9,11}$). A period of significant change was evident in the former Polytechnic sector toward research prior to 1992, and Vice Chancellors recognised the opportunity to join an elite group of former Polytechnics that had achieved research degree awarding status ($A_{1,2}$, $C_{2,3,4,5,8}$ , $D_{1,3,4,5}$, $E_{1,5}$).

This stage marks a key period when the informal research leader recognises the opportunity for career progression through research over teaching. Personal research interests are aligned with the desire to enhance status and standing in the research community. Recently acquired research qualifications are seen within the context of career progression within the newly recognised Art and Design research field (HEfCE, 1992).

Critically, the success of the informal research leaders to co-ordinate successful submissions to the 1992 RAE and attract additional funds which had hitherto been ineligible to Art and Design, encourages a consolidation of resources to expand the capacity of research groups, through new appointments, space and equipment (A4, 6, B3,8,11, E6,7,12). The formal endorsement by the University of the 'Research Centre' is only evident after external verification of this kind, either by research rating (RAE) or demand from industry (A8,9,10, B18,21, C5,7,18, D11,12,15,17, E13,16,17).

## 10.5 Formation

### 10.5.1 FORMALISATION (Managerial Expertise)

Having established a clear agenda with the Dean ($A_7$, $B_{12}$, $C_7$, $D_8$, $E_{10}$), the informal research leaders are formally recognised by the University research community within their position as Research Centre Directors. Attention moves from the ad-hoc co-ordination of individual researchers to the systematic management of research and the production of knowledge ($A_{10}$, $C_{12}$, $E_9$). All narratives identify a period of negotiation that stems from a recognition at faculty level of the research activity and the need for sustained resource access to maintain it ($A_6$, $B_{14,16}$, $C_{14,15}$, $D_{19,20}$, $E_{12}$).

The increase in externally funded contract research and research studentships leads to the implementation of management information systems, processes and procedures. Management of the research process becomes central to the development of the Centre. Information systems reinforce the Research Director's leadership as the number of research staff grow and the Research Centre seeks to develop a separate identity to meet the demands of external stakeholders. Therefore, the Research Centre seeks to establish its own development roles (marketing, accounting, business development and publication co-ordination) to report directly to stakeholders ($A_{11}$, $B_{9,15,17}$, $C_{14}$, $D_{13}$, $E_{11,16}$) and as a result, the Research Director has to delegate roles and responsibilities through a process of FORMALISATION.

### 10.5.2 CRITICAL MASS (Achieving Optimal Size)

The analysis suggests that the interdependence of the Research Centres' position within the faculty grows simultaneously with the ability to attract studentships, grants, research contracts and external finances ($A_{24,25}$, $B_{18,21,22}$, $C_{19,22,25,27}$, $D_{22,27}$, $E_{27,29}$). The formal status of the Research Centres brings with it an increased pressure to maximise research income through an efficient and sustainable research team. Research Directors' accounts suggest an optimal size for the research group. The ability to retain the research agenda through a 'critical mass' of research personnel insures against the risk of losing the knowledge base through any individual loss of staff expertise ($B_{20,23}$). Furthermore, it ameliorates the potential for one income stream to disproportionately affect the Centre's viability ($D_{35}$).

The Research Directors with prior management experience are keen to utilise the effects of CRITICAL MASS to remain in control of their operational environment. This phase of Research Centre development is also recognition of the dependency upon the University and the necessity to remain sensitive to both internal and external forces of control.

For example, Case C embarks upon a development programme to establish a post-graduate course to act as a ‘feeder’ toward research degrees – achieving recurrent teaching income and progression to research degree registration. Essentially, CRITICAL MASS enables economies of scale from which to maintain strategic control and dedicated roles and functions can be undertaken to retain a separate identity to the University.

## 10.6 Development

### 10.6.1 GAMESMANSHIP (Tact & Political Nous)

Whilst the strategic direction of the Research Centre is entirely congruous with the faculty and the staff in Case B and D ($B_{24,27}$, $D_{18,20,26}$), synergy of agendas are not maintained in Cases A, C and E during development. A conflict of interest arises as the independent profile of the Centre grows in accordance with the need to promote itself to external stakeholders, and competing pressure on resources at faculty level ($A_{14,15,17}$, $C_{16,17,19,20,21}$, $E_{20,22,24}$).

A change in research strategy threatens the autonomy and influence of the Research Directors in cases A, C and E ($A_{19,20,21}$, $C_{13}$). The Research Director in Case C demonstrates strategic awareness to negotiate with the hierarchical level above his Dean – through the Vice Chancellor ($C_{23,26,32}$) – to establish a Research Institute ($C_{24}$). The Research Directors in Cases A and E employ diplomacy and tact when internal competition for resources increases, but ultimately have to reconcile reduced autonomy and authority for faculty research strategy to the Dean, in order to maintain their status ($A_{20,21,24,32}$, $E_{23,24,25,26,27}$).

These examples highlight a period of GAMESMANSHIP displayed by the Research Directors to maintain continued support for the development of the Research Centre. Adroit micro-political skills (strategic awareness, negotiation skills and tact) are required to negotiate continued resource access and University investment.

### 10.6.2 KNOWLEDGE CAPITALISATION

The Research Centres in Cases B and C consolidate their role through the development of activities to improve the research culture at faculty level ($B_{25}$, $C_{32}$). Emerging research themes are developed through 'clusters' of academic staff led by research leaders within the faculty to reinforce the integration of research and teaching ($B_{28,31}$, $C_{24,25,29}$). The expertise of Research Centre staff is utilised for staff development on research methods and techniques ($B_{25, 30}$, $D_{28}$) as well as teaching on degree and postgraduate programmes.

Knowledge becomes a tangible market asset for the Research Centres in Case A, B and C, who seek to diversify research services undertaken with industry. Case studies of knowledge transfer are used for marketing purposes (including Teaching Company Schemes and EU

funded New Product Development projects with regional SMEs) and postgraduate programmes are created to supplement annual RAE funding ($A_{30,34}$, $C_{30,33}$, $D_{30,33,34}$).

The *axial concept* KNOWLEDGE CAPITALISATION encapsulates the transfer of knowledge generated through research into teaching and becomes a practical means by which faculty and Centre objectives remain synonymous. This supports the development of a research culture at faculty level and the transfer of knowledge within the regional economy.

### 10.6.3 NETWORK CONNECTIVITY

Continued research performance and ability to attract external funding remain key components of the Research Centres' long-term sustainability. In particular, the Research Director's personal networks – both through supervision and the wider research community – are significant in the ability to attract key researchers ($A_{2,5,4}$, $B_5$, $C_{10,11,28,29}$). Contacts built up over the Research Centre's development also provide a means of securing research contracts and representation on national and international research/subject bodies ($A_{31,34}$, $B_{6,26,32}$, $C_{31,33}$).

In addition, the cases highlight an increasing regional focus through regional development and enterprise agency links at a local level. Therefore NETWORK CONNECTIVITY becomes an ongoing process of strategic alliances with agencies and bodies that have authority over funding to provide a network of new project opportunities and responsiveness toward client needs.

## 10.7 Conclusions

The cross case analysis has revealed complex patterns of cause and effect relationships during Research Centre origination, formation and development.

8 *axial concepts* have been identified to explain the causality of Art and Design Research Centre development – INTRAPRENEURSHIP, CREDENTIALISATION (Qualifications & Credibility), OPPORTUNISM (Recognising & Responding to Demand), FORMALISATION (Managerial Expertise), CRITICAL MASS (Achieving Optimal Size), GAMESMANSHIP (Tact & Political Nous), KNOWLEDGE CAPITALISATION, and NETWORK CONNECTIVITY.

The analysis of Research Centre origination reinforces the significance of factors surrounding the origination of the Research Centre and the influence of *axial concepts*: INTRAPRENEURSHIP, CREDENTIALISATION (Qualification & Credibility) and OPPORTUNISM (Recognising & Responding to Demand). It shows that staff qualifications; senior management commitment; resource investment; and opportunism on behalf of research active staff, could all have acted as essential conditions to the origination of Cases A-E.

It highlights the need for the Research Directors in Cases A, B, D and E (the Research Director in Case C having already run a Research Centre) to develop leadership skills and establish clear objectives to facilitate development against an agreed research strategy. The Research Directors build the research team and re-deploy their organisation's resources to enable it to operate effectively.

However, it would appear that Cases B, D and E show an organic development built upon a strong trust based relationship between the staff involved and the Dean. As the prospective Research Directors gain their credentials following research degree completion, support and guidance is forthcoming from the Dean, and research studentships, facilities and equipment are all introduced incrementally. This is in contrast to Cases A and C where the research capability is 'bought in' through new appointments and immediately senior management commitment is secured. Yet, the basis of this commitment and the subsequent resource investment by the faculty remains the same in both contexts, as the Research Directors' research profile and ability to improve the University's research rating are pre-requisites.

The factors evident during the formation phase demonstrate the importance of operational issues within the influence of *axial concepts*: FORMALISATION (Managerial Expertise) and CRITICAL MASS (Achieving Optimal Size).

Interestingly, in all cases except Case C – where the Assistant Dean was clearly in a position of authority to establish the Centre upon appointment – the formal endorsement by the University of the 'Research Centre' is only evident after external verification, either by research rating (RAE) or demand from industry. Hence, it could be argued that the Universities were risk averse in this respect – acting indifferently to research groups until they prove themselves to be credible by peer review and financially viable.

Indeed, the success of Art and Design departments in the 1992 RAE appears to have been hard won due to the poor perception of the subject area within the wider University research community. However, Case D demonstrates the perseverance and strategic awareness of the Research Director which ultimately leads to an enhancement in personal equity.

This phase of development demonstrates that Research Councils and research clients require dedicated project information systems and communication systems as a condition of funding. For example, in Case D the Research Council required the Research Centre to set up its own systems for monitoring and evaluating performance, and Case B showed that University financial systems were inadequate to support new project costing methods. For Research Centres to meet these criteria existing University procedures have to be re-appraised (or set-up in parallel) in the light of the new management information required. Therefore, the Research Centre needs to be construed as a separately managed unit for it to report its performance externally.

Factors evident during the development phase demonstrate problems encountered as the Research Centre pursues growth and highlights the influence of *axial concepts*: GAMESMANSHIP (Tact & Political Nous), KNOWLEDGE CAPITALISATION and NETWORK CONNECTIVITY. Cases A, C and E show a divergence of consensus between the Dean and the Research Director over the Research Centres' purpose and research objectives. This leads to much of the support for resource access being withdrawn, a situation only rectified by a change in Research Director (Case A) and line manager (Case C). In Case E however, the Research Director's authority is compromised by his management responsibilities as Head of Department during a time of financial crisis. This situation results in the merger of separate research groups and deference to the Dean who sets the research strategy.

Tensions at faculty level (for example in case C), highlight the importance of managing levels of autonomy and authority between the Research Director and the Dean, as the Research Directors' personal capital and that of the Research Centre grow[100]. Indeed, the role of the Dean as mentor, evident in the set-up phase ($D_{1,3,4}$), and the Research Director as protégé (Allen *et al.*, 1997), no longer retains mutual benefit or status. As the relationships change they could be likened to what Katzenbach and Smith (1993) describe as the 'team leader' and the 'hierarchical leader' roles. The Research Director in each case earns the respect of the team by promoting the work of individuals and by maintaining a high research profile in the field. Whereas the Dean – exemplified in Cases A and C – is often seen to be a hierarchical player who seeks to specify the roles, remit and goals of the Centre, potentially reducing the commitment of team members and the sense of ownership by the Research Director.

This phase sheds light upon the sustainability of the Research Centre, the importance of diverse income streams and the ability to influence regional/national research policy. Difficulties arise in embedding a growing research capability when the University is predominantly teaching orientated (all except Case A were former Polytechnics or technical colleges). Cases B and D specifically sought to re-address this balance by employing post-doctorate staff to develop new research areas, and to broaden the base for post-graduate supervision. This approach also helped the Research Centres manage the risk of the research funding drying-up in particular areas subject to fluctuations in industrial, economic or public funding.

A complex range of factors have led to the Research Centres becoming established and sustainable initiatives within each University. Interestingly, difficulties become apparent as a direct result of becoming an effective specialist unit. 'Enclaves' of specialist research knowledge can fail to disseminate their understanding of the subject back to teaching staff and students, and therefore, a successful 'research capability' does not lead to a growing 'research culture'.

[100] For a full discussion of power relationships between Research Directors and Higher Education senior management during the set-up and development of Research Centres, see Roworth-Stokes and Perren (2000).

To counteract this, Cases B and D become a 'hub' for professional development and research support for staff within the faculty, and seek to further practice based methodologies in respective disciplines. The Research Directors in all cases have also developed highly sophisticated networks of client contacts and representation on funding councils/subject bodies from which they can monitor changes in research funding policy and access research work. They therefore draw upon their influence within the wider research community to inform University research strategy[101].

[101] For example the Research Directors' in Case B and E both point to to positions on research bodies and editorial boards as evidence of their ability to inform University research policy and maintain links with the wider, external, research community.

# Chapter 11: Factors in the development of Art and Design Research Centres

## 11.1 Introduction

This chapter relates to the last objective proposed in Chapter 1, to propose a generic model of Art and Design Research Centre development. The original *framework* provided a broad, free flowing and flexible protocol to promote discussion and data collection with respondents and Figure 11.1.1 below now presents the *framework* in its empirically verified form. In addition, the Chapter will locate the factors identified within the context of previous work by reviewing the literature surrounding Research Centre development and identifying areas of divergence and convergence.

The *framework* is now provided overleaf.

## The Interaction of Exploratory Factors and Axial Concepts during the Development of Research Centres

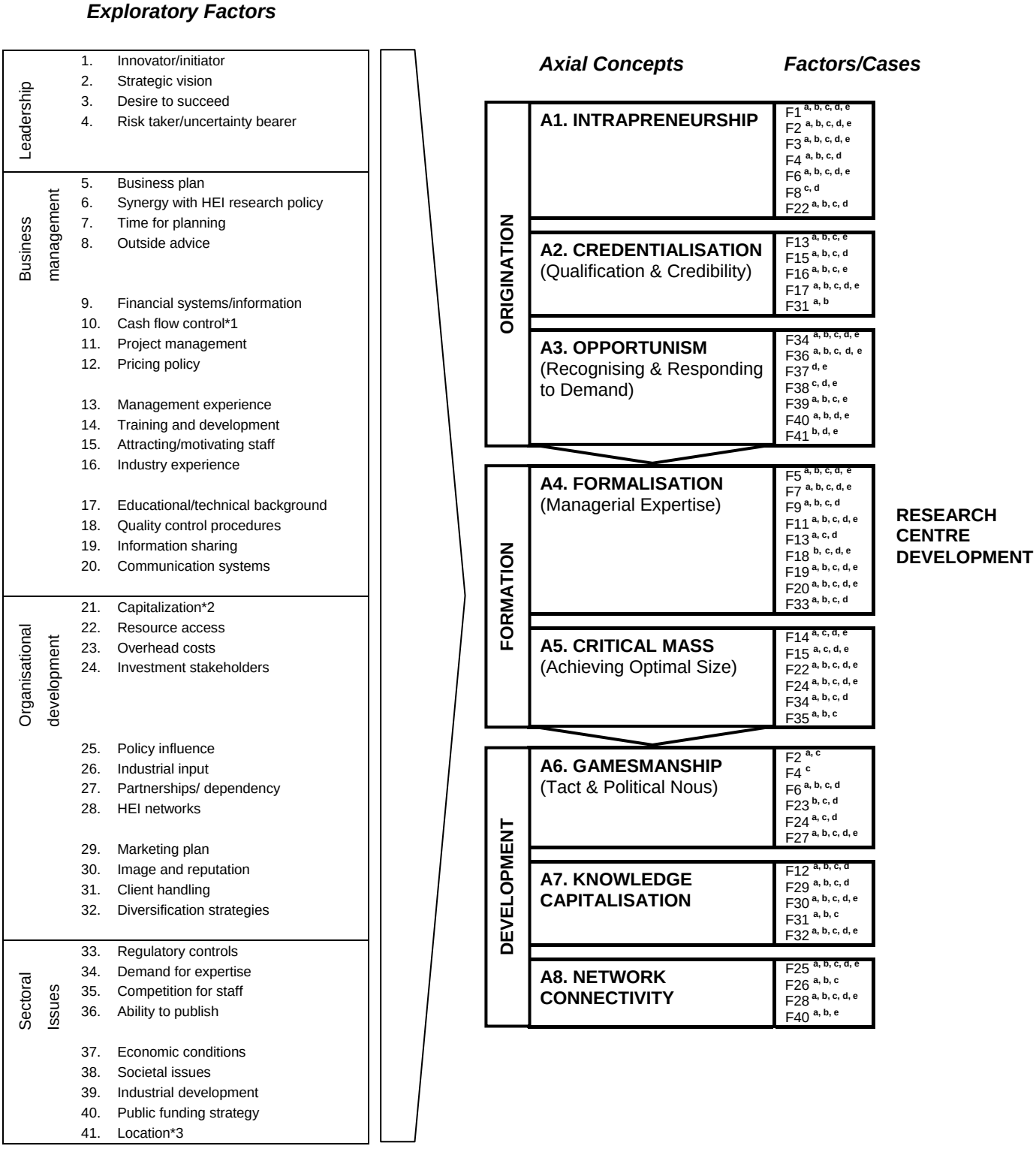


Figure 11.1.1 Revised *framework* to interpret the development of Art and Design Research Centres

*1 Cash flow control as a factor became irrelevant during analysis because overdraft limits/overhead charges against income are cushioned by annual University budgeting systems.
*2 Capitalization was removed as a factor because of the lack of evidence to support the concept of capital investment as described by Gaskill, L. *et al* (1993) i.e. financial capital secured to invest in the new venture. Investment is provided through resource access and appointment of staff (evident through factor F22 and F24).
*3 Factor 41 is an additional factor to the *framework* in Chapter 2. Location was found to have a significant effect in Case B, D and E due to the increased funding allocations for research, teaching and 'knowledge transfer' activities (e.g. European Regional Development Fund to stimulate economic growth).

### 11.1.1 Structure

The *framework* groups the patterns of interaction between factors and *axial concepts* into those associated with Research Centre origination, formation, and development. The intention is to provide a practical means of interpretation for the *framework* in its empirically verified form, in the same way that Arnold *et al.* (1998) sought to describe management factors to further best practice in Research Technology Institutes[102] .

At the commencement of each section of analysis a table will provide a summary of the influence of factors – whether positive or negative – as they interact with the *axial concepts* during Research Centre development. Throughout the discussion an audit trail is provided to remind the reader of the original context to the case itself. For example $F18^{b,c,d,e}$ will refer to the factor **quality control procedures**, evident in Case B, C, D and E, and $B_4$ will relate to the node 'regional demand for expertise' evident in the causal connection diagram in Case B (Figure 5.1.1.1). Quotations are provided to illustrate the complex nature of the relationships identified but in the case of evidence that has already been brought to the reader's attention during earlier chapters, references will be used to avoid duplication.

### 11.1.2 Contents

This chapter will now encompass the following sections:

11.3 Formation

- 11.3.1 Factors influencing the *axial concept*: FORMALISATION (Managerial Expertise)
- 11.3.2 Comparison with existing literature: FORMALISATION (Managerial Expertise)
- 11.3.3 Factors influencing the *axial concept*: CRITICAL MASS (Achieving Optimal Size)
- 11.3.4 Comparison with existing literature: CRITICAL MASS (Achieving Optimal Size)

11.4 Development

- 11.4.1 Factors influencing the *axial concept*: GAMESMANSHIP (Tact & Political Nous)
- 11.4.2 Comparison with existing literature: GAMESMANSHIP (Tact & Political Nous)
- 11.4.3 Factors influencing the *axial concept*: KNOWLEDGE CAPITALISATION
- 11.4.4 Comparison with existing literature: KNOWLEDGE CAPITALISATION
- 11.4.5 Factors influencing the *axial concept*: NETWORK CONNECTIVITY
- 11.4.6 Comparison with existing literature: NETWORK CONNECTIVITY

11.5 Frequency count of factors

The following and final Chapter will investigate the significance of the *framework* in the context of previous research that has focused on Research Centre development. In addition, it will identify the key conclusions drawn from preceding chapters and identify policy implications for the future.

[102] A more detailed analysis of the work of Arnold *et al* (1998) is contained within Chapter 2 (Literature Review).

## 11.2 Origination

### 11.2.1 Factors influencing the axial concept: INTRAPRENEURSHIP

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F1] Innovator/initiator** | + Senior managers can stimulate a positive environment (support and resource access) for research active staff to initiate a change in research culture. | **b, c, d, e** |
| | + A charismatic leader with a strong personality can engender trust and loyalty in research staff. | **a, c, d** |
| | - Senior management control can reduce the autonomy of the Research Director to pursue new initiatives. | **a** |
| **[F2] Strategic vision** | + Research Director's strategic awareness of funding opportunities can facilitate the development of research groups. | **a, b, c, d, e** |
| | - Internal competition for resources can act as a distraction for strategic planning. | **a, c** |
| | - Enforcement of a University plan for research can lead to lack of commitment/ownership by research staff. | **e** |
| **[F3] Desire to succeed** | + Clear career pathways can act as a positive motivating influence. | **a, b, c, d, e** |
| | + Challenging the research community to establish a methodological approach can reinforce leadership credentials. | **d** |
| | - Combined senior management and Research Director roles can reduce intrapreneurial behaviour. | **e** |
| **[F4] Risk taker/uncertainty bearer** | + Pursuing new 'untested' areas of research activity can enhance research status. | **a, b, c, d** |
| | - Restriction of Research Director's role can lead to a cautionary approach. | **a** |
| **[F6] Synergy with HEI research policy** | + Mutual objective (individual and organisational) to improve research performance can encourage intrapreneurial behaviour. | **a, b, c, d, e** |
| | - A conflict of personal agendas between the Research Director and Head/Dean can be a negative influence. | **a, c** |
| **[F8] Outside advice** | + Advice and guidance from peers (mentors) can have a positive influence on the Research Director's career and the strategic direction of the Centre. | **c, d** |
| **[F22] Resource access** | + Access to equipment and space can act as a positive influence for research leaders to develop research groups. | **a, b, c, d** |

Table 11.2.1.1 Factors influencing the *axial concept*: INTRAPRENEURSHIP

The *axial concept* INTRAPRENEURSHIP (A1) was found to have been influenced by the following factors: [F1] **innovator/initiator**, [F2] **strategic vision**, [F3] **desire to succeed**, [F4] **risk taker/uncertainty bearer**, [F6] **synergy with HEI research policy**, [F8] **outside advice**, and [F22] **resource access**.

All Cases demonstrate the importance of the **innovator/initiator** ($F1^{a,b,c,d,e}$) in the early development of the Research Centre and the pre-Research Centre phase highlights an increased emphasis in University strategy toward research ($A_3$, $C_1$ ,$D_1$, $E_3$). For example Case C highlights a period of significant change in the former Polytechnic sector. Institutions sought to achieve University status and pressure was being exerted by Vice Chancellors to secure research degree awarding status (CcLEGS, p.9).

Case A highlights the significance of an 'entrepreneurial' research leader who initiates contact with Huxley (CaLEJT, p.10) to address a gap in the department's research performance. Newly appointed subject heads and Deans were keen to make an immediate impression in research performance ($A_{1,2}$, $C_{2,3,4,5,8}$ , $D_{1,3,4,5}$, $E_{1,5}$) during a period of 'gearing' up for the 1992 RAE (Frayling, 1993).

The vocational nature of the Art and Design subject disciplines and the commercial focus of many of its courses – particularly Industrial Design and Design Management – created a culture of professional practice with local industry ($B_{1,2,4}$, $E_{2,4,6}$). Such activity had the potential to demonstrate research outcomes eligible for the RAE whilst enhancing the department's profile by working with well known companies (CbLEBP, p.9).

However, where the Research Director's role evolved from a teaching post, the role of Head of Department/Dean is of increased significance. Here, key members of staff who are capable of initiating change are given access to re-deployed resources and are able to unite people around particular research interests ($B_{3,8,11}$). The Dean (former Head of School) in Case D highlights a mutual ambition with a teaching colleague (the current Research Director) to initiate a change in research culture: *'it was a personal ambition that we really had to get on the map'* (CdLEBP, p.13).

Indeed, senior management's recognition of key individuals as catalysts for change is reinforced by the latitude afforded to the Research Director who acts with a high degree of authority and autonomy. Case B illustrates the Research Director's recognition that the role carries with it a responsibility to act as an **innovator/initiator** and it is for others to act the role of 'devil's advocate'.

> *'Keeping things as they are is the sign of the death bell. I can see from an organisational and administration point of view that there's stability and cosiness in that but it tends not to be the way we work and at times I think that's by default rather than one of design. I'm in a situation where I can hope to envisage ideas at a point*

*where I am one of the key people who are actually involved in that process of envisaging…the role is to actually come up with ideas myself and in a situation like that there are other people in the department that end up acting as a sort of 'devils advocate' for the people who do the considering.'*
(CbSIBP, p.21)

These intrapreneurial personalities appear to command an immense amount of respect and loyalty amongst research staff in Case A and Case C. In these examples, research staff align their career progression with the Research Directors' reputation as an ***innovator/initiator*** in the research field, above and beyond any loyalty to the University. Case C illustrates this point. The interview being conducted following the announcement that the Research Director had been appointed to a neighboring University.

*'I've known Fred Jackson for ten years and I joined the Centre for Design Research about five/six years ago…it had just moved with two or three others from Rushton University…My association is quite long and varied. I started off part-time as I had a career break for five years so it was getting back into it. That's when I started off with a one month contract and then it was a three month contract, then it was half-time and then it went full-time.'*

*'He [Fred] has very strong vision…He's a good boss, he's very relaxed and tolerant. He's fair and I think we have created a good atmosphere here [following re-location]. Our students have come with us. It's very relaxed, he does have an agenda, he is fair and he'll do his best for the students.'*
(CcSIHT, p.9 and p.71)

In all Cases the Research Director and the Head of Department/Dean demonstrate **strategic vision** (F2[a,b,c,d,e]) by responding to the opportunity afforded by a change in Art and Design research funding[103]. Chapter 8 illustrates the awareness of assessment through peer review to achieve external recognition of the research being undertaken (CdLEPW, p.13). Yet, the Research Directors' **strategic vision** appears to have had a negative influence upon the development of Cases A and C due to a divergence of objectives between the Centre and the departments' academic provision. Once the nature of the research work undertaken is seen to lack transferability to the departments' curriculum, tensions are apparent which affect operational issues and resource access.

> *'We're difficult because we don't fit in. I think we do a lot for the University in terms of our research and our reputation, the number of students we have and the income we bring in because we do bring in a lot of income. It's strained because we don't fit in to the structures, we're not a School and the University tries to make us follow the procedures they operate at School level and that causes an awful lot of problems.'*
> (CcSIHT, p.141)

The Research Director's split responsibility in Case E (with the joint role of Head of Department) illustrates how a University strategy to re-structure departmental research undermines the Research Director's own **strategic vision**. The Research Director's account in Chapter 9 (CeLEMO, p.24) indicates the Research Unit is in a *'transition period'* which in turn leads to a lack of ownership of the research strategy and a consequential break-down in the Unit's development.

> *'we've had structural problems because of the re-structuring of the school, faculty and so on, having a hiatus where we had no real leader as a Research Unit, I think we're beginning to recover from that.'*
> (CeSIDU, p.208)

In Case B, C, D and E, the Research Directors' intrapreneurial behaviour appears to have been triggered when a clear path exists to combine a personal research interest with the opportunity to take control of one's own career progression – the result being an enhanced **desire to succeed** ($F3^{a,b,c,d,e}$). For example the account of the Research Director in Case C (Chapter 7) would suggest a strong motivation to become a 'research leader' rather than a fine art 'practitioner' when it became evident that his field of inquiry had wider significance to the Art and Design community (CcLEFJ, p.9).

Furthermore, the allegiance to a particular methodological approach by the Research Director in Case D is closely aligned to a **desire to succeed**. When this approach to research is questioned by the University research community ($D_{11,16}$) the meaning takes on greater significance as the Research Director's personal credibility becomes challenged (CdLEJW, p.11). The following quotation illustrates the respect for the Research Director's perseverance and determination to succeed.

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[103] The context for all the Research Centres, prior to 1992, was of a sector coming to terms with the

*'There is also a kind of something about Paul's personality that when he says something you feel that there is this iron will there to make it happen in some way and I think that kind of clear view and determination and a willingness to listen to others, those are the kind of skills that you have to bring. An unusual combination.'*
(CdSIMS, p.71)

Nearly all cases demonstrate the Research Director's intrapreneurial ability to undertake **risk and uncertainty** ($F4^{a,b,c,d}$) by pursuing new and untried research fields which had hitherto not been eligible for the RAE (see Chapter 1, Context and Purpose of the Inquiry). Yet, the degree of risk undertaken and the level of autonomy and responsibility afforded to Research Directors during the early period of Research Centre development, is not always sustained. As the Research Centres develop and formalise processes, procedures and responsibilities, the necessity for risk taking itself may well diminish. Indeed, the Research Director in Case D was keen to point out that *'we're not now wearing white coats and goggles'* (CdLEPW, p.53).

The latitude to undertake risk and challenge convention would appear to reinforce Research Directors' authority. When the Research Director in Case A ($F4^{a}$) has her capacity to undertake risk curtailed by the mandate of appointment (see Chapter 5, Case A Analysis), her ability to be 'seen' to be intrapreneurial is reduced – a factor recognised as a potential weakness for the Centre's development in being too risk averse.

*'It is being more managed than led at the moment but that is not taking anything away from Jane as that what was needed when she took over. It is a very safe step by step approach at the moment. There is no cavalier approach in any shape or form.'*
(CaSISF, p.67)

*'The previous Director would probably be consistently coming up with new ways of doing things, and throwing new ideas around. He was a different personality. There are advantages and disadvantages between them and maybe the best would be a hybrid between them both.'*
(CaSISF, p.22)

Both the semi-structured interviews and the life-elicitation interviews demonstrate that **synergy with HEI research policy** ($F6^{a,b,c,d,e}$) is a prerequisite to the support offered by

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definition of Art and Design practice as a legitimate research endeavour for submission under the RAE.

senior management toward INTRAPRENEURSHIP. Deans/Heads of Department, particularly those recently appointed (Case A, C, D for example), are conscious of the need to respond to a University agenda toward research – essentially the need to improve research performance in the department. Case A for example demonstrates mutual benefit of procuring a ready made research capability to enhance departmental research output (CaLEJT, p.10). Case B illustrates a particularly 'democratic' process undertaken to develop new activities within the Research Centre but it is typical of the extent to which Research Centre policy is supportive of the department and University research strategy.

> *'We have a departmental research committee which meets on average about twice a year and out of that business we look at new issues for research across the different disciplines of the department concerning design and design practice. We have individual members of staff who know that they come forward with research ideas at any point ...The ideas would first come to me and I would give advice about how they ought to be developed and presented on paper. So when we have a number of ideas we can actually begin to compare and contrast the relative merits of them. The department would consider these. I would make initial comments and proposals to the Head of Department and eventually decision-making about which projects would go forward would be made by the Research Centre management group.'*
> (CbSIBP, p.12)

However, the need for some elements of the intrapreneurial personality – innovator, risk taker and uncertainty bearer – appear to change as the Centre develops and as departmental priorities and senior managers' agenda's change. For example, case A and C highlight that operational problems can occur when the Research Director's objectives are incompatible with a Dean who has a 'different mission' (CcLEFJ, p.23).

In times of crisis, Research Directors appear to rely upon the **outside advice** ($F8^{c,d}$) from respected members of the research community ($D_{14}$). This is evident in Case C and D in two ways. Firstly, the Researcher Director's research degree supervisor is often cited as a 'mentor' providing both methodological guidance and career advice. For example Case C highlights the role played by the Research Director's supervisor in his first research position and subsequent progression to jointly direct a research unit (CcLEFJ, p.9).

Secondly, Case D demonstrates the Research Director's utilisation of a former senior academic, now retired, to act as an 'elder statesman'. Rather than lose his experience and

expertise, the Centre consults him on matters of promotion and strategy ($D_{14}$). Whilst his personality is 'understated' his judgement is held in high regard by the Centre's research staff.

> *'Don is a very quiet man but brings a very important element in the way the Centre works because it is difficult to describe, he is like an elder statesman really and is also a very important diplomat…He is responsible for a lot of the design output and I think he is understated but extremely keen and has this wealth of experience but he doesn't push his personality. He's not noisy but he's crucial.'*
> (CdSIMS, p.86)

Lastly, INTRAPRENEURSHIP would not be possible without **resource access** ($F22^{a,b,c,d}$). This factor features highly in the accounts of the Research Director's early recollection of the Centre's formation through: access to space, time to conduct research, dedicated equipment and the appointment of research posts. Indeed, the ability to consolidate informal research activity through the use of dedicated space appears to be an early signal of intrapreneurial intentions to meet external demand for research expertise. Case B suggests that dedicated space is required to portray an image of a professional research consultancy, which in turn, yields income to fund further investment in resources (CbLEBP, p.9). Furthermore, the inability to achieve **resource access** by the 'entrepreneurial' research leader (CaLEJT, p.10) in Case A directly results in a move to Huxley University where space and equipment were available.

### 11.2.2 Comparison with existing literature: INTRAPRENEURSHIP

Gibb and Davies (1990) suggest that the 'entrepreneurial personality' is one of five areas within the literature surrounding the growth of SMEs. The traits or behavioral attributes such as being a **risk taker/uncertainty bearer** and **innovator/initiator** are often identified by researchers as having influenced the development of the small firm. Indeed, Gibb and Davies imply that more often than not, the entrepreneur is risking his/her own capital which spurs a **desire to succeed**. Boyett and Finlay (1994) have transferred these personality traits to the concept of the 'educational entrepreneur' – individuals that have learnt to seize the opportunities afforded by market imbalances created by sectoral change. However, this study found no evidence of Research Directors risking his/her own capital. In fact the factor **capitalization** (F21) could not be substantiated because of the lack of evidence to support the concept of capital investment as described by Gaskill *et al* (1993). Rather, investment in research capability was provided through **resource access**, often the redeployment of space

and the appointment of staff (evident through factor F22 and F24) and therefore the analogy with the private sector owner manager, as in the SME, falls down.

The notion of the 'entrepreneur' in Higher Education appears simplistic in practice and a direct comparison with the commercial sector needs careful scrutiny. Whilst there is evidence of entrepreneurial opportunity provided in a market subject to change[104] (Kirzner, 1973) – the Research Directors clearly recognise and exploit the opportunity afforded by research investment – they are never independent of the strategic objectives, resource constraints and governance of their host institution. Hence, **synergy with HEI research policy** becomes intrinsic to the Research Director's ability to demonstrate entrepreneurial behaviour.

In this respect this study finds many similarities with the work of Tornatzky *et al.* (1999) who likens the Research Director to an 'intrapreneur' as opposed to an 'entrepreneur' due to the need to establish a separate identity and market for the research group whilst working within limited resources and levels of autonomy[105]. All cases demonstrated the intrapreneurial role of the Research Director who becomes a central figure to the strategic direction and entrepreneurial culture of the Research Centre. The Research Director still demonstrates entrepreneurial traits[106] through the negotiation and re-deployment of resources, the capacity to exploit new markets, and the **desire to succeed**, but they are always constrained by the operational context. This would support the work of Harvey *et al*. (2002) who suggest that successful research leaders are able to shoulder the bureaucracy of the public sector to create an entrepreneurial working environment.

Nonetheless, the research findings support the view that the entrepreneurial traits of the Research Director evolve and become sensitive to the operational and sector context. For example, the role of the Research Director in Case A changes to become less of a **risk taker/uncertainty bearer** and more of a manager/administrator once the Centre has become established (discussed further in FORMALISATION). Likewise the Research Directors in Case B, D and E evolve from ad hoc and hands-on co-ordination of informal research groups to become intrapreneurial leaders with increased levels of autonomy and responsibility. Gartner (1989) argues that entrepreneurial behaviour is incrementalist as opposed to an individual being an innate risk taker and the findings from this research concur with this finding.

[104] Created by the RAE which encompassed Art and Design as a distinct Unit of Assessment in 1992.
[105] The concept of the academic 'intrapreneur' was originally cited in Perlman *et al* (1988).
[106] The founding Director in Case A was openly reported as being 'entrepreneurial' (see Chapter 5) and Harvey *et al* (2000) put forward a 'successful' leader who was seen as 'a wheeler dealer, shaker, mover' (p.23).

The axial concept INTRAPRENEURISHIP reveals many similarities with the text concerning entrepreneurship as described by Gibb and Davies (1990), and Kirzner (1973). However, we have seen that the Research Director's ability to demonstrate entrepreneurship is constrained by the operational context in which they work. Current notions of education and civic entrepreneurs (Boyett and Finlay, 1994; Leadbeater and Goss, 1999) which are based upon the presupposition that entrepreneurial behaviour is readily transferred to Higher Education may, in practice, be speculative and simplistic. The post-bureaucratic culture (Henkel, 1997) of Higher Education necessitates an 'intrapreneurial' (Perlman *et al*., 1988) approach to the negotiation and re-deployment of resources with an implicit balance struck between personal objectives and departmental policy (through the Head of Department/Dean).

In addition, the research suggests that the Research Directors evolve and develop the propensity for intrapreneurial behaviour and operate with increasing levels of autonomy and authority as their personal research standing grows (discussed further under CREDENTIALISATION). Hence, intrapreneurial behaviour can be incrementalist as suggested by Gartner (1989) whereby entrepreneurial traits, such as **risk taker/uncertainty bearer**, **innovator/initiator**, and **strategic vision**, can be developed and nurtured.

### 11.2.3 Factors influencing the axial concept: CREDENTIALISATION

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F13] Management experience** | + Previous experience of academic leadership/research management can have a positive effect upon the Centre's development | **a, b, c, e** |
| **[F15] Attracting/ motivating staff** | + Senior managers can identify and support the credentials of key 'agents of change' to positive effect.<br>- Inability to retain key members of staff (due to incomparability of private sector pay and/or enhanced conditions/support) can lead to loss of research potential/ expertise. | **a, c, d**<br>**a, b** |
| **[F16] Industry experience** | + Staff with industry related experience/qualifications can have a positive influence upon the development of research consultancy services. | **a, b, c, e** |
| **[F17] Educational/ technical background** | + Relevant postgraduate qualifications and research degrees enhance the credentials of staff to secure investment. | **a, b, c, d, e** |
| **[F31] Client handling** | + Continued association with large clients enhances the prospect of HEI resource access/investment. | **a, b** |

Table 11.2.3.1 Factors influencing the *axial concept*: CREDENTIALISATION

The axial concept CREDENTIALISATION (A2) was found to have been influenced by the following factors: [F13] **management experience**, [F15] **attracting/motivating staff**, F16] **industry experience**, [F17] **educational/technical background**, and [F31] **client handling**.

The CREDENTIALISATION of research staff becomes a senior management priority in response to the inclusion of Art and Design within the RAE. A new market opportunity in post-graduate work is created and research staff with the ability to supervise are encouraged to facilitate the formation of new research groups ($A_5$, $B_7$, $C_8$, $D_{10}$, $E_7$). Senior management commitment to improve research qualifications amongst staff is apparent in Cases B and D and Research Directors identify strongly with recently acquired research credentials during the early phases of Research Centre origination ($B_{10,13}$, $D_{6,7,9}$).

**Management experience** ($F13^{a,b,c,e}$) was identified as a positive influence upon Research Centre development through the ability to supervise and recruit research students ($B_{19}$, $C_9$, $D_9$, $E_7$). Nearly all research leaders had previous experience of academic leadership through course management and/or research management before their appointment to the position of Research Centre Director.

Case C represents the Research Director with the most extensive experience having previously directed a research unit at another University and undertaking the role of Deputy

Dean at Middleton. His personal research credentials attract former colleagues to Middleton along with their projects and research students. His ability to draw upon his management skills during the period of research group re-formation is recounted in terms of a commodity which is 'brought' to his new University.

> *'I'd left a couple of projects behind at Rushton and one of those projects was concerned with colour management systems…When that project finished the key Researcher there, a chap called Steve Rome…didn't want to go back…and I persuaded the University to actually bring him here together with one other individual as a Research Fellow...So by 1993 we had kind of expanded, doubled…We'd managed those proposals over a fairly extensive period of time so we had quite a track record if you like, in terms of actually obtaining external funding and then running the project successfully. We were both publishers if you like, we both produced a lot of papers so we had a lot of experience in what you might call a traditional sort or research environment…and we both were experienced in supervising research students to completion. So we had got quite a lot of experience in sort of basic things of research. Getting the money to do it, doing it, producing the outcomes and also generating the training of Ph.D students. So that's really what we brought to Middleton.'*
> (CcLEFJ, p.21)

Case C demonstrates the value of CREDENTIALISATION through the **management experience** of the Research Director to secure research funds, manage research staff, supervise research students and publish research outcomes.

> *'A skill is being able to give people responsibility and allow people to have a degree of freedom to actually get on with what they think is important knowing that you have agreed it is important. A lot of the skills I have are quite good with people particularly in work type relationships…A kind of skill of leadership, in just being able to take people with you where you would like to go. I wouldn't put too much value on the other skills like being able to manage a budget. You can learn those. Trying to minimise administration is quite important and are often about not worrying about things that don't really matter. If you've got a bill which you have charged to the wrong cost centre and you know this and it doesn't matter don't worry about it.'*
> (CcSIFJ, p.70)

Whilst it is only the founding Research Directors in Cases A and C that had managed a research group before founding the Research Centres, the process of supervising research students within regulatory systems enforced by the research councils would appear to provide an opportunity to demonstrate **management experience**. Case D, already referred to in Chapter 8, suggests how important it is to establish suitable management systems due to the Research Councils being *'pretty tight on what you're doing'* (CdLEPW, p.15)

The examples above from Case A and C demonstrate the positive effect on Research Centre development of **attracting/motivating staff** ($F15^{a,b,c,d}$) who have appropriate research credentials. Equally, the inability to retain key members of staff appears to have a negative effect through the loss of knowledge and expertise. Case A illustrates the difficulty of staff retention. Particularly when their credentials are highly valued within the private sector and career progression is limited.

> *'it [the Research Centre] has had problems retaining staff and I think it will have problems recruiting staff that have sufficient experience. The pay and promotion structure within the model that we have at the moment means that you reach a certain level and it's difficult to get beyond where Jane is. The pay in Universities considering the experience I'm offering mean that the rewards in Industry are greater.'*
> (CaSISF, p.188)

All cases with the exception of Case D, where there is limited work undertaken directly with industry, highlight the importance of **industry experience** ($F16^{a,b,c,e}$) when undertaking consultancy, product development or training activities. Whilst recognising the credentials of working in industry through their own employment history, many of the researchers highlighted the necessity for staff in an academic environment to maintain links with industry through projects to retain awareness of technologies and current industry practice.

> *'My qualifications of Engineering. Industrial Design and Marketing have been essential…I have worked in consultancy [externally within a design agency] for two years and also two years 'in house' for a Design and Development department…the advantage of the Centre is that it has lots of links with industry. It's doing industry biased projects that have benefited the Centre. The Project Manager worked in industry before she came to the Centre.*
> (CaSISF, p.93-96)

It would appear that the **educational/technical background** ($F17^{a,b,c,d,e}$) in respect of the Research Director's post, necessitates a research degree. Whilst not all Research Directors hold a Ph.D – the Research Director in Case E for example does not hold a Ph.D but was made a Professor through his work in the field – its importance to early career progression and process of CREDENTIALISATION is significant. Its benefits are manifold: the supervisor acts as a career mentor (as described in Case A and C); it provides an opportunity for early networking in the field (Case A, C and D); and it demonstrates the contribution to knowledge within the field of inquiry (Case D). In addition, and unsurprisingly, the research qualifications/credentials of the Research Director enable them to become research degree supervisors and build a track record.

> *'A lot of people don't have any supervisory experience to draw on and a lot of people in Art and Design haven't done any Ph.D type of research so they don't quite know what it is all about. At other institutions you know, the staff feel a bit threatened by it all. You know the staff are being told they have got to come up with their research, where is it and why haven't they done it, so there is a lot of that I think a lot of people see us as being very well organised about it really.'*
> (CdSIMS, p.152)

Cases A and B indicate that experience of meeting clients demands ($F31^{a,b}$) can be a 'rite of passage' for the Research Director to become credentialised within the University research community. Indeed, all cases illustrate the need for the Research Director, with the support of the informal group of research staff around him/her, to have achieved significant external income before formal recognition by the University research community of their national/international standing. The Research Directors in Case A and C were able to demonstrate this capability upon appointment. For example in Chapter 7, the appointment of the Research Director in Case C was based upon his successful 'track record' of Research Council funding (CcLEFJ, p.21).

The Research Directors in all other Cases were required to achieve a 'track record' of success before the Research Centres were formed ($A_{8,9,10}$, $B_{18,21}$, $C_{5,7,18}$, $D_{11,12,15,17}$, $E_{13,16,17}$). Reporting upon the successful outcome of the 1992 RAE, the Research Director in Case D is clear that such endorsement through peer review '*really enabled us to get going'* (CdLEPW, p.21).

### 11.2.4 Comparison with existing literature: CREDENTIALISATION

The text surrounding Research Centre development suggests that successful research leaders have to be adroit in **client handling** to secure research income and maintain extensive links with the national/international research community (Harvey *et al*., 2002). The study conducted by DORCISS (1995) identified that there was a need for: investment in training; training strategies which are clear and auditable; and research management training programmes to ensure the Research Centre can **attract/motivate** key staff. Arnold *et al*. (1998), Tornatzky *et al*. (1999) and Whiston (1990, 1995) reinforce the need for effective training and development strategies to ensure researchers have an appropriate **educational/technical background** to undertake contract research.

Whilst these studies help us to understand the process of CREDENTIALISATION (training, development and networking) for researchers in an established Research Centre they do not reveal the importance of the Research Director's 'track record' and 'transferable' skills – particularly **management experience** – to the Centre's early formation and development. Here, the text surrounding small enterprise development provides a more useful explanation to the findings of this research. The concept of the entrepreneurial owner manager seeking business growth suggests that professionalism combined with an ability to become an effective manager, and the opportunity to transfer experiences (education, skills, knowledge, personal capital and networks) plays a part in securing external resources for sustained growth (Gibb and Davies, 1990). The evidence from Case A and C would suggest that the Research Directors were very aware of their **management experience**, the knowledge of the subject field, the network of contacts they possessed, and the ability to secure research contracts and successfully complete them. The Research Director in Case C is particular eager to point to his credentials and the personal capital he 'brought' to Middleton (see Chapter 7). This would support the view of Taylor *et al*. (2002) who suggests that management authority and legitimacy in smaller organisations is not assigned to a role or the qualifications brought to the role, rather management credentials are judged by the competence of managerial actions in a social context.

The Research Directors in the other Research Centres each held positions of programme management before pursuing a research career and in Case A, B and E, **industry experience** formed the basis of the Research Centre early work. Thus, all the Research Directors were able to draw upon substantial experience of academic management, research management, research supervision and successful research income generation before their appointment or formal recognition as Research Director.

All cases would suggest that external recognition – through the RAE or through successful completion of Research Council contracts – is a pre-requisite to any 'formal' status by the University as a Research Centre Director. This would suggest that the peer review process of research by discipline plays an important part in researchers opportunity for career development and promotion. Whilst Henkel and Kogan (1996), Court (1999) and Dearing (1997) have suggested that research performance by an academic can significantly enhance the opportunity for career development over teaching, this research would go further to propose that career development for researchers is dependant upon externally verified credentials.

All cases demonstrate that credibility derived through the RAE and/or knowledge transfer with industry were preconditions to official status of the 'Centre' within the University. The Research Director has to work within the wider research community to secure its standing in the field through: publication output; external income generation, with successful completion of research contracts; and suitably qualified staff to undertake supervision of research students.

The research shows the importance of **educational/technical background** of staff who possess a Ph.D in an emerging subject field. The Dean in Case D made the direct association of the Research Director's Ph.D with early career development. It is surprising then that the text surrounding Research Centre development does not touch upon the need to secure a research degree when pursuing a research career. Whilst it may appear obvious, the research suggests that the Research Director's position clearly necessitates a research degree[107] – the majority of senior researchers interviewed also possessed similar qualifications[108]. The findings suggest it is essential that research teams are able to draw upon staff with qualifications at this level in order that research degree students can be supervised and capacity for quality research maintained.

[107] The Research Director in Case E did not hold a Ph.D but had been awarded Professorial status owing to his contribution in the field.
[108] Although this was not always the case, for example the Senior Researcher interviewed in Case A had a postgraduate engineering qualification which was highly relevant to the near-market knowledge transfer work he was undertaking.

### 11.2.5 Factors influencing the axial concept: OPPORTUNISM

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F34] Demand for expertise** | + Demand for the Centre's specialist expertise and knowledge can have a positive influence on development. | **a, b, c, d, e** |
| **[F36] Ability to publish** | + The RAE can engender a competitive approach to the output of 'quality-related' research in order to secure income.<br>+ The necessity of being self-financing can be an encouragement to business development. | **b, c, d, e**<br>**a, d** |
| **[F37] Economic conditions** | + A strong regional economy can increase investment for research studentships.<br>+ Government initiatives to stimulate regional regeneration can lead to an influx in available funding for research activity. | **d**<br>**e** |
| **[F38] Societal issues** | + Changes in society can lead to increased demand for new fields of research investigation. | **c, d, e** |
| **[F39] Industrial development** | + Advances in industrial technology can create opportunities for new product development consultancy.<br>- A decline in regional manufacturing can reduce the opportunity for consultancy. | **a, b, e**<br>**e** |
| **[F40] Public funding strategy** | + An increase in Government funding toward HE/industry collaboration can have a positive influence on development. | **a, b, d, e** |
| **[F41] Location** | + Regional funding of schemes to facilitate regeneration and economic development can have a positive influence on development. | **b, d, e** |

Table 11.2.5.1 Factors influencing the *axial concept*: OPPORTUNISM

The *axial concept* OPPORTUNISM (A3) was found to have been influenced by the following factors: [F34] **demand for expertise**, [F36] **ability to publish**, [F37] **economic conditions**, [F38] **societal issues**, [F39] **industrial development**, [F40] **public funding strategy**, and [F41] **location**.

OPPORTUNISM is the combination of market demand for Art and Design research – the knowledge, skills and expertise required due to socio-economic, technical and industrial change – with sector reform which has placed HEIs in a 'quasi-market' for their core, funding council income (Boyett and Finlay, 1994). All cases evolved from the original Research Director's knowledge and expertise (supply) with a demand ($F34^{a,b,c,d,e}$) from industry ($A_{8}$, $B_{3,4}$, $C_{5,8}$, $D_{6}$, $E_{6}$) and/or sectoral pressure to increase research output (demand), in response to the 1992 RAE ($A_{3,9}$, $B_{18,21}$, $C_{18}$, $D_{14,\ 15,16,17}$, $E_{7,9,11}$).

OPPORTUNISM also marks a key period in the origination of the Research Centre when the informal research leader realises their career potential by recognising and responding to the demand for his/her knowledge and expertise. For example, the Research Director in Case D,

having recently qualified with a Ph.D, sees a '*kernel there of enthusiasm and possibility'* (CdLEPW, p.9).

All the Research Centres studied were able to demonstrate that OPPORTUNISM had led to a successful track record in research outputs – an **ability to publish** (F36[a,b,c,d,e]). This is not surprising as this was a key consideration as to their inclusion in the study – Chapter 3 describes the process of sampling 'successful' Research Centres and all had formed before the 1992 RAE. Therefore, all cases are able to report achievement of 'national' or 'international' research standing through the 1992 and 1996 RAE, together with the profile of research with industry.

Nonetheless, the notion of competition through a 'market' in which the Research Centre operates was not instantly recognised by all those interviewed (Case D and E). The Senior Researcher in Case D implies a sense of isolation to some of the work being undertaken within the Centre which may impact upon research publication.

> *'Well actually, using the term market is interesting because I don't think many of us actually realise that we are a market at all. It is not a term which we tend to apply to what we do… I think most of it is really all part of creating this general background for what we do…For example, one of the referees [to an academic journal] said "well, I can see they're doing a lot of work but what about everywhere else" and I was thinking "oh well I don't know what everyone is doing everywhere really"…But as for marketing, I think it something that we do have to address more clearly. It is complicated when you have got so many different initiatives.'*
> (CdSIMS, p.178)

OPPORTUNISM can also be enhanced through **economic conditions** (F37[d,e]) and **societal issues** (F38[c,d,e]). The analysis of Case E (Chapter 4 and Chapter 9) illustrates a region with a high percentage of economic regeneration funds due to social deprivation. As described by the Research Co-ordinator this had a direct 'knock on' effect in terms of the income available for research.

> *'We're in a very particular situation. At the moment we are affected by the economy in a very unique way because there is a lot of money going into the region, and there is increasing reconciliation funds. A lot of money has been thrown at the University –*

*I mean millions – and Art and Design is putting forward a project to get some of that funding. We're concentrating on applying for a Research Centre grant.'*
(CeSIDU, p.196)

**Industrial development** ($F39^{a,b,e}$) also appears to influence OPPORTUNISM. The nature of work undertaken for industry necessitates that changes in industrial technology must be monitored so that the Research Centre is abreast of current practice. Case B illustrates the need to maintain a watchful eye on **industrial development** at the risk of the Centre's expertise becoming isolated.

*'We have the task of keeping up to date with the business of the digital nature of business practice from an organisational resource point of view. From a concurrent and simultaneous working point of view. That is a slightly more difficult task as well because you can't do it in isolation, you can't develop your thoughts about it in a skillset and take it to industry. You've got to do it constantly in partnership with industry.'*
(CbSIBP, p.194)

Equally, a decline in OPPORTUNISM can occur through a change in **industrial development**, particularly when a decline in regional manufacturing can have a significant effect upon the product development undertaken by the Research Centres in Cases A, B and E. Indeed, the analysis of Case E highlights the negative effect on the former Design Research Centre when manufacturing was re-located out of the region ($E_{21}$) because it: *'wasn't even economical'* (CeLEMO, p.12).

In addition, it is worth noting an additional factor to the *framework* – **location** ($F41^{b,d,e}$) – which became an influential factor in its own right due to effects of increased funding allocations for research, teaching and 'knowledge transfer' activities in some regions due to their industrial and social contexts (this background is discussed further in Chapter 4). These issues have a direct effect upon the ability of the Research Centre to access additional income.

The influence of **location** on OPPORTUNISM is often realised through regional **public funding strategy** ($F40^{a,b,d,e}$) through initiatives designed to stimulate economic growth. As pointed out by the Dean in Case D following the announcement of 1992 RAE, when compared to Art and Design departments with a similar rating in other regions: *'we got three and a half times the amount of money'* (CdLEBP, p.12).

### 11.2.6 Comparison with existing literature: OPPORTUNISM

As discussed above, OPPORTUNISM is affected by a broad range of economic, industrial and societal factors and this research has demonstrated the way in which Government policy (through the Research and Higher Education Funding Councils) in particular, has created a 'quasi-market' for Art and Design research (Boyett and Finlay, 1994).

This research also supports the view of Frayling (1993) which indicated Art and Design departments were 'gearing up' for research following a change in **public funding strategy** which enabled Art and Design (HEFCE, 1992) to become eligible for research funding. The appointment of the Research Directors in Case A and C and the appointment of the Head of Department in Case D, clearly relates to University strategies to appoint posts with a mandate to enhance research performance. Indeed, the accounts of the Head of Department/Dean of Faculty and the Vice Chancellor in Case C, highlight a highly competitive situation (prior to 1992) in which research credentials were required to be able to join an elite group of former Polytechnics that had achieved research degree awarding status[109].

Hendersen (1980) and Porter (1980) have suggested that pressures such as these lead to an increased **demand** due to less intense rivalry and competition than might be the case within more mature and long established markets. The lack of market planning and strategy in some cases (for example Case E) and the fact that all cases still appear in the upper end of the research spectrum[110] might suggest this to be true of this sector. In addition, many of the Research Directors reported that the sophistication of the management systems, research processes employed and the resources available to them bore no resemblance to the early phases of development. As already pointed out above, the Research Director in Case D was keen to point out that *'we're not now wearing white coats and goggles'* (CdLEPW, p.53). This would also concur with Henkel and Kogan (1996), Court (1999), and Dearing (1997) who indicate a growing level of sophistication by Universities to organise themselves effectively for knowledge transfer and published output as a direct result of research assessment and competition for resources.

The addition of the factor **location** to the empirically verified *framework* highlights a distinct lack of understanding in the Research Centre development literature of the implications for geographic access to markets. Access to a 'market' for the research services provided by Research Centres is often seen as a completely abstract concept to the point of its production

[109] See Chapter 7 for analysis of Case C.

– the 'place' in which the knowledge is produced – due to the national or international focus for innovation and technology systems (such as Research Technology Institutes and the Research Councils). For example Arnold *et al.* (1998) and Whiston (1990) recognise the importance of effective access and communication with clients and stakeholders to shape and inform research services but they fail to relate these issues to the proximity of the 'knowledge producer' to the market for 'knowledge transfer'. However, the literature on small business development has often cited **location** as a cause of business failure (e.g. Gaskill *et al.*, 1993) and business success (e.g. Gibb and Davies, 1990) due to the local and regional influence of **economic conditions**, **industrial development** and **societal issues**.

As discussed above, **location** has had a significant influence upon the development of the Research Centres in Case B, D and E as a result of increased funding allocations for research, teaching and 'knowledge transfer' determined at a regional level. It has the potential to influence 'market' opportunity, particularly when the delivery of knowledge based services such as consultancy and training, are sensitive to local and regional demand.

To conclude, a 'quasi-market' for research has been established in the Art and Design sector and these developments can be directly traced back to the effects of the 1988 Education Reform Act [111]. For the Universities in this study, the move away from local authority governance and CNAA control has facilitated a culture of self-determination and a move away from *'substantially bureaucratic'* (Henkel, 1997)[112] management structures. In addition, the influence of Government and indeed European Union intervention in the development of small firms – through increased access to technology transfer – has created a significant market opportunity for Art and Design Research Centres. Case A, B and C in particular, were able to access new income streams through knowledge of new technology and the management process to develop new products to market. European Social Fund projects and Teaching Company Schemes (see Chapter 4) have provided substantial project funding[113] to work directly with industry and to further the Research Centre's core activity of sustaining national and international quality research output.

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[110] See Chapter 3 for sample frame criteria and Chapter 4 for background on the universities.
[111] The roots of these changes can be traced to the impact of the first research assessment in 1985 following the Jarratt report (as noted by Cave *et al*., 1997). However, the 1988 Education Reform Act led to the establishment of the HEFCE and to vocational subjects, such as Art and Design, being included within the RAE.
[112] Former polytechnics became universities due to end of the binary divide following the 1991 Government White Paper and were eligible for research funding from 1992 in the RAE.
[113] In addition to 'core' income secured through the RAE.

## 11.3 Formation

### 11.3.1 Factors influencing the axial concept: FORMALISATION

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F5] Business plan** | + A business plan developed in accordance with the departmental/University research strategy can have a positive effect on the Centre's development. | **a, b, c, d, e** |
| | + Evaluation and review of the effectiveness of a business plan can retain its relevance to changing internal/external circumstances. | **c** |
| **[F7] Time for planning** | + Regular planning meetings can be beneficial to establish/inform priorities. | **b, c, d, e** |
| | - Spending too much time on management rather than leadership can act as a negative influence. | **a** |
| **[F9] Financial systems/information** | + The development of independent (parallel to University) financial monitoring systems can be a positive influence. | **a, b, c, d** |
| | - Lack of budgetary authority can reduce ownership/autonomy. | **a** |
| **[F11] Project management** | + Clear delegation of project management responsibilities can be a positive influence on Research Centre development. | **a, b, c, d, e** |
| **[F13] Management experience** | + Previous experience of managing research projects can have a positive influence on appropriate management systems. | **a, c, d** |
| **[F18] Quality control procedures** | + Research output can be enhanced by peer review/feedback prior to presentation or publication submission. | **b, c, d** |
| | + Industry standard quality control procedures can improve business development opportunities. | **b** |
| | - The nature of arts practice through exhibition can lead to a reactive mode of quality control. | **e** |
| **[F19] Information sharing** | + Open, information structures can improve involvement of staff in the development of the Centre. | **a, b, d** |
| | - Poor information dissemination can be detrimental to working relationships. | **c, e** |
| **[F20] Communication systems** | + Multiple methods of communication (e-mail, intranet, planning meetings etc) can be a positive influence for knowledge management. | **a, b, c, d, e** |
| **[F33] Regulatory controls** | + Good working relationships with academic services (e.g. finance department, personnel etc) can have a positive influence. | **a, b, c, d** |
| | - Tensions with academic service departments/committees can lead to operational difficulties. | **a, b, d** |

Table 11.3.1.1 Factors influencing the *axial concept*: FORMALISATION

The axial concept FORMALISATION (A4) was found to have been influenced by the following factors: [F5] **business plan**, [F7] **time for planning**, [F9] **financial systems/information**, [F11] **project management**, [F13] **management experience**, [F18] **quality control procedures**, [F19] **information sharing**, [F20] **communication systems**, and [F33] **regulatory controls**.

Largely as a consequence of having to respond to the needs of funding agency criteria, the FORMALISATION of the Research Centres leads to the development of project management, monitoring, information/communication and quality control systems. The increase in externally funded contract research and research studentships necessitates the formalisation ($A_{10}$, $C_{12}$, $D_{12}$, $E_{9}$) of the research process. Management information systems also reinforce the Research Directors' leadership as the number of research staff grow and the Research Centre seeks to develop a separate identity ($A_{11}$, $B_{9,15,17}$, $C_{14}$, $D_{13}$, $E_{11,16}$) to meet the demands of external stakeholders.

> *'we thought we would apply to the EPSRC for research studentships…That was incredibly useful because, if you're involved with a Research Council then they're pretty tight on what you're doing and how you're doing it…So we were really under the microscope'*
> (CdLEPW, p.13)

The process of FORMALISATION is undertaken with the endorsement of the Dean or Head of School/Department ($A_{7}$, $B_{12}$, $C_{7}$, $D_{8}$, $E_{10}$) and the narratives identify a period of negotiation to secure resources in return for specialist services and research output ($A_{6}$, $B_{14,16}$, $C_{14,15}$, $D_{19,20}$, $E_{12}$).

All Cases demonstrate formal mechanisms to develop and review a **business plan** ($F5^{a,b,c,d,e}$) which ranges from long term strategic plans agreed at University level (Case C) to annual prioritisation of activities at departmental level (Cases A, B, D and E). Such plans serve a number of purposes which aid the development and sustainability of the Research Centre. Firstly, they determine the role of the Centre within the department and University research strategy. Secondly, they forecast income and expenditure and lastly, they are means by which resource access or further investment can be negotiated to ensure the continued support of new fields of enquiry. The description put forward by the Research Director of Case B illustrates a typical process of planning:

> *'We have a kind of rolling programme which does have short, medium and long term aspirations. There are some aspects of long term aspiration that are ongoing and that is to encourage the work of the different design disciplines not just in the Centre of Industrial Design but across the department through the Research Centre for Industry [the research hub for the department co-ordinated through the Centre of Industrial Design]. Again these tie into the fundamental aims of why the Centre exists and that is*

*to develop new knowledge about design practice and to disseminate that to students and also to the profession at large. The more practical articulation of that is that currently we have medium term aims which are based around strategic projects being agreed [through the Head of Departments and the Dean]…These have medium to long term future to them. In some cases strategic projects eventually gets to become a critical mass, almost a Centre on its own because of the number of people who attach themselves to it…A lot of our future is tied into these kind of issues.'*
(CbSIBP, p.38)

**Time for planning** (F7[a,b,c,d,e]) plays an increasing role in the FORMALISATION of the Research Centre as the Research Directors' responsibilities appear to shift from 'ad hoc' and informal leader to planner, and director of research leaders/project managers. All cases indicate an increasing amount of time for planning which results in less 'hands on' research by the Research Director. Equally, the Research Directors seek to use time for planning as a means to engage in debates about the future of the Centre and commitment to the objectives identified. Case E illustrates how the Research Director's role has become increasingly strategic.

*'3 years ago I was hands on. At this stage, yes, I think the word remote probably is an unfair one. I can't engage in the practical aspects of day to day running, but I am certainly very aware of 99% of that which is undertaken…Keeping an overview.'*
(CeSIMO, p.27)

Case A also illustrates (as described in the INTRAPRENEURSHIP section above) that too much time allocated to **time for planning** can have a negative impact on the dynamics of the working environment and the perception of the Research Director's capacity to demonstrate 'leadership' rather than 'management' skills.

Case A, B, C and D suggest that **financial systems/information** (F9[a,b,c,d]) systems and 'tight' **project management** (F11[a,b,c,d,e]) control of externally funded projects (such as those described through the Research Council Studentships in Case D) have a significant influence on FORMALISATION. The following quotations from Case A highlight how these systems – often established in parallel to those of the University – provide Research Directors and research leaders with information to control, plan and co-ordinate the Centre's activities.

*'It is very tightly financially managed and then they are reviewed at a monthly meeting with a University accountant and we keep an up to date spreadsheet of money coming*

*in and going out so at any time we can see how we are doing so rather than one overall target we split down the targets into different funding routes so we know how each one is doing on an individual basis. We can compare year on year to see where our funding is coming from and which area to expand or reduce.'*
(CaSISF, p.56)

*'All of our expenditure on the project is monitored by ourselves and the University system so it's double checked. Likewise the income, the invoicing is monitored by us and the University. The two are always different because there is always a month lag between them but in essence they are the same. We do that with a spreadsheet and that's what the University uses too. That is monitored by each Project Manager. Each of them monitors the budget on their project.'*
(CaSIJT, p.60)

It is worth noting here that whilst income and expenditure was regularly monitored ($F9^{a,b,c,d}$) there was no evidence of actual ***cash flow control*** (F10) whereby the balance between income and expenditure was 'controlled' to ensure monthly overdraft or overhead costs were not breached. The nature of the University's annual budgeting systems cushioned any imbalance between income and expenditure and therefore this factor was removed from the *framework* in its empirically verified form.

The Research Directors in Case A, C and D were able to draw upon their previous **management experience** ($F13^{a,c,d}$) to establish appropriate management systems during FORMALISATION. Case C for example, provides evidence of the Research Director's experience of managing the *'basic things of research'* (CcLEPW, p.21). The following quotation from Case C illustrates how the Research Director seeks to delegate responsibilities within a formalised operating structure.

*'You would have a whole range of activities and you would be allocating people to those roles. Each of the leaders had some kind of responsibility, one may be responsible for international development, another responsible for quality within the teaching components of what we were doing. The actual activity often determines a lot of the key roles. If you take all of that out I think you need research leaders who are very good and admin and staff support who are both very good. People who are basically 'can do' people.'*
(CcSIFJ, p.84)

**Quality control** (F18[b,c,d,e]) was also found to have become an influential factor once the Research Centre had achieved FORMALISATION. The need to determine the quality of work and the ability to produce it to a high standard becomes a key concern to maintain reputation and credibility. Case B, C and D employ procedures appropriate to the primary audience of the work being undertaken. For example Case B operates ISO9000 in keeping with new product development procedures recognised by industry whereas Case C and D undertake structured sessions to prepare researchers for the delivery of papers at conferences. Case D illustrates the method of providing feedback and constructive criticism to ensure the quality of work before it is presented to research peers.

> *'if somebody was going to conference...we would do a mock run-through the presentation. We have done that for years actually, it is one of the first things we decided to do. It doesn't matter who it is, if I am going then I'm put mine through the mill as well. You know, just a couple of people, whoever is available in a lunch hour or something and people run through their work and somebody checks the timing, eye contact you know, volume, speech, you know and somebody kind of looks at the whole organisational thing so that there's a dry run and then feedback and amendment and hopefully when they go out they can do a very good presentation. I think we do, in general. We have had feedback on that, that most of the presentations are very professional.'*
> (CdSIPW, p.160)

Yet, formalised **quality control** procedures can be difficult to implement due to the nature of individual's own personal practice. Case E illustrates that the ability to determine the quality of research output by the Centre's fine artists is retrospective after the work has been exhibited. Therefore there is an inherent inability to 'control' quality other than to respond to poor quality work after the work has been subject to external review.

> *'We are in reactive mode usually for the majority because obviously a fine artist will put forward their works to a gallery for inclusion or otherwise. We won't have seen that work usually in advance…We will only as a Centre get sight of particular elements as they become more public, so there are certain difficulties with sustaining an upfront quality…That is a terribly reactive way and it is not a way one would like to manage anything but the reality of the nature of the practice as it is, I don't think that there is a better way that I know of at this stage to ensure that. We don't wish to become a vetting agency at the front end.'*
> (CeSIMO, p.169)

**Information sharing** (F19[a,b,c,d,e]) and **communication systems** (F20[a,b,c,d,e]) were also found to have a significant effect upon FORMALISATION. As the Research Centres develop and the number of staff grow, the complexity of project information increases which in turn requires more sophisticated forms of information and communication. All the Research Centres had developed communication systems such as planning meetings, e-mail groups and intranet/internet. In addition, Case A and D had regular 'away-days' (CaSISF, p.42 and CdLEPW, p.33) and Case A, B, and D all made the point that their open plan studio space had been designed to facilitate an open and informal environment in which staff and research leaders could communicate freely. The researcher in Case B illustrates how information is communicated through formal and informal means.

> *'Everybody seems to be informed and if they are not then they probably ask…I think there are formal and informal ways of doing this. For example Bill [Research Director] goes abroad and takes lots of boards with him to inform people of research that is going on. Lots of feedback when he comes back, lots of interest when he gave a quick summary of what actually happened there and whether or not people were interested. I bring back a lot of business cards from conferences…the information is there and if I can think of somebody who can use these contacts then I would approach them and people would know about them or if not then they would just ask. For example 'I'm looking for this' and use the internet [a Research intranet developed by the Research Centre].'*
> (CbSIJM, p.120)

**Information sharing** appears to have had a negative effect during the development of Case C and E which both appear to have encountered difficulties achieving effective communications during periods of change – Case C moving out of departmental control to attain Research Institute status and Case E combining design and fine art research activity during a merger of faculties. Whilst formal communication systems are in place, research staff become suspicious of information being 'managed' and lack of trust in central information sources gives way to informal rumour and gossip.

> *'We have systems of memos and e-mails…There is this management board where information is leaked rather than released. I don't really think they discuss anything important as far as I can gather but there is a feeling that although it is minuted it is never circulated what is actually going on there. It's on a need to know basis and maybe all that was going on it would just worry you too much anyway. You're working*

*as hard as you can for this institute and then you find that the management aren't committed to it. It filters down and it's fairly relaxed but there isn't anybody saying that this is the strategy for the next twelve months but you might hear through salacious gossip what might be!'*
(CcSIHT, p.103)

It was apparent that working within a University's **regulatory controls** (F33[a,b,c,d]) had a profound effect upon the FORMALISATION of the Research Centres. Often cited as 'bureaucracy' – particularly Research Committee regulations and finance procedures – a negative influence is initially evident when over zealous enforcement of processes and procedures creates operational problems (Case A, B and D). Yet, the accumulative effect of this phenomena is reported as a positive influence due to enhanced systems of management information created as a result of negotiation.

Most of the Research Directors appear to have become pragmatic toward University procedures and regulations. However, the following points raised by the Research Director in Case B provide a typical illustration of the operational difficulties encountered due to the predominance of teaching over research and the reliance upon a single source funding (through HEFCE).

*'there are a lot of tensions…If there weren't tensions at times then you could perhaps say that things weren't moving on but a lot of the tensions come from administrative, generalised administrative policies. The majority of what happens in the University is to do about academia and teaching. There are aspects of that general policy and development at times which confronts the more commercial aspect of what we are about because in a sense when we are acting as a commercial unit we have to be aware of the way business operates and we seem to be part of that business community. There are some things that the University does on occasion which are kind of going in the opposite direction. This can make life very difficult for us.'*
(CbSIBP, p.138)

### 11.3.2 Comparison with existing literature: FORMALISATION

Albrighton and Thomas (1996) have argued that the external image, through corporate identity and internal physical environment, is an important means of social representation and identification for the 'near-market' groups operating in Higher Education. All the cases

demonstrate the establishment of **communication systems** and marketing devices such as corporate identity and promotional material which seek to promote a separate identity and reputation of the recently formed Research Centre to that of their host HEI – in much the same way as an independent private sector enterprise. Whiston (1990) argues that Research Centres establish their own **financial systems**, **project management** procedures, **quality control procedures**, and **information sharing** mechanisms to understand their own organisational dynamics better and to present those organisations to evaluators in the best possible light. This study echoes these findings.

DORCISS (1995) have suggested that Research Centre Directors often have a highly developed vision for their specialism and their Centres but they are not always so good at internal **communication systems**. This research would concur with the suggestion that Research Centre Directors have a sophisticated sense of strategic vision but the research appeared to suggest there was no lack of communication of the strategy itself. In contrast, the study found a surprising degree of synergy between the researchers understanding of the strategy with that of the Research Director even if they were not as eloquent in describing it. Yet, this finding needs to be qualified in respect of the Research Director's authority to set a clear strategy for the Research Centre. For example, Case C and E both indicate a lack of communication and trust in 'formal' communication channels during periods of conflict when a divergence of agendas occurs at senior management level. Whilst channels of communication are used to put forward a vision and strategy there appears to be a reluctance by research staff to accept its validity due to the Research Director's precarious authority.

The cases demonstrate a desire to portray an external image which positions the Research Centre in a specific field of inquiry, much as a small firm might target 'niche' markets as opposed to the general sector (Storey *et al.*, 1989; Siegel *et al.*, 1993). The comparison with the small business development (as described in depth in the literature review) is also evident through the willingness to recruit and delegate to new research leaders as the Research Centre Directors place more emphasis on **time for planning** and a **business plan** in the same way an owner manager would plan and delegate to managers in order to grow (Storey *et al*., 1989).

The Research Directors studied, clearly allocate more time toward management and planning as the Research Centre becomes formalised which leads to the implementation of management information systems including **quality control procedures**, and processes which comply with stakeholders **regulatory controls** (both internal and external). However, a number of contradictions with the text on small business development become apparent as research groups become formalised as Research Centres. Firstly, this research does not concur

with the work of Flamhotz (1986) which suggests that the owner managers' control of the small firm may need to reduce to achieve growth. In the text on small business growth, the founder's ability to deal with loss of control can be seen as either a hindrance or positive influence toward the growth of the business. The cases studied indicate the reverse – an inclination toward an increased 'locus of control' as the Research Directors credentials become recognised through peer review[114]. Even when the Research Centre increases to the point when its operation (i.e. postgraduate programmes, research degree supervision, research council contracts and knowledge transfer services) becomes eligible under University regulations to become a Research Institute (as in Case C) the autonomy of the Research Centre Director appears to increase.

Secondly, the text on business management factors often cite the ability of the enterprise to plan development both at an organisational and strategic level in order to maximise market opportunity through product development (for example Ansoff, 1965). The cases all demonstrate the strategic awareness of the Research Centre Director in their own particular field but the study found a wide divergence of planning to develop new markets and most researchers recognised this as a clear weakness. Yet, this did not appear to have significantly affected the Research Centres development and the ability to achieve high outputs of research publications. One reason for this could be the nature of an emerging field and the context of enterprise in a largely state-regulated market (as described by Henkel, 1997) which provides a reactive rather than pro-active means of securing income.

As stated in the literature review (Chapter 2) there is limited work that has focused on the early phases of Research Centre formation. Whiston (1995) has suggested that ESRC Research Centres undergo evolutionary phases of growth and development in the same way as those that affect business. This study bears a number of broad similarities to this finding. For example, Whiston highlights the 'taking off' stage, when the Centre had received major funding and was eager to succeed, followed by the 'plateau' stage, when a consistent level of resource and market reputation had been secured, and lastly, the 'in decline' stage, characterised by severe financial difficulties. The first two of these phases are clearly evident in this study as the Research Centres achieve a CRITICAL MASS of research staff and then seek to formalise management structures, information systems and organisational processes and procedures. However, there are differences in the nature of the 'in decline' stage as the ESRC Centres are subject to a withdrawal of core funding whereas the Research Centres

[114] Wanting to retain power and independence because of the desire to control one's own environment and destiny as opposed to an 'external locus of control' when there is a belief that one has little control over events or indeed one's own destiny (Rotter, 1966).

studied had mostly achieved self-financing status[115]. Yet, Cases C and E demonstrate some common features of the ESRC Centres as they seek to secure additional resources to sustain growth and are subject to changes of departmental research agendas and financial constriction. Whereas the ESRC Centres Whiston studied closed, the Research Centres in Case C and E were able to re-invent themselves to develop new research fields – Case C becomes a Research Institute and Case E merges with another Faculty's research staff.

Eason (1995) also sought to understand the organisational structures available to the growing (staff and resources) Research Centre through comparison with business models. He identified four types of organisational structure: the Small Research Group with a common mission and set of values; the Hotel Model with autonomous sections to pursue different research programmes; the Project Structure with centralised management with delegated responsibilities to team leaders; and the Dual Role model with a project management structure as above but with extended corporate development for all staff. Eason suggested that the Small Research Group would have difficulty functioning beyond 10 to 20 staff (depending upon circumstances) due to the inability to keep tight control of a central 'shared' mission. He suggested other implications of growth such as the need for 'a management team' and a body to support the Director in the development of policy.

Case D would suggest that the 'dynamics' – effective communication, direct management and social interaction – created by a team of 5 researchers can be lost when staff numbers rise above 10. To resolve this situation, research 'clusters' were introduced specifically to regain the efficiency and effectiveness of the founding team within an increased number of sub-groups.

In addition, it is important to remember that all of the cases retained a senior management 'champion' through formation and development – often the Head of Department, Dean or the Vice Chancellor ($A_1$, $B_{12}$, $C_{1,23}$, $D_8$, $E_{28,31}$). Yet the champion's role in securing resource access and supporting new appointments, during formation, is coupled with a personal investment in the reflective kudos of enhanced research performance – the champions in Case A and Case D both appear to have been promoted as a direct result of success in the RAE ($A_{29}$, $D_{18}$). To take an analogy with the private sector, a division of equity in return for external investment[116] is equivalent to the successful Research Centre champion securing a stake in his future career development.

[115] As stated in the analysis of factors above, the overhead costs are subsumed by the University and therefore self-financing in this context means recovery of running costs.

### 11.3.3 Factors influencing the axial concept: CRITICAL MASS

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F14] Training and development** | + An active engagement in the development of the individual and the group can facilitate a culture of critical debate and discussion. | **c, d** |
| | + Suitable qualified supervisors can facilitate new research groups. | **d** |
| | - Lack of opportunity for training and development to further career can have a negative effect upon staff retention. | **a** |
| | - Investment in training and development can lead to recruitment of staff into industry. | **e** |
| **[F15] Attracting/motivating staff** | + Securing the appointment of at least 5 research staff can have a positive influence on organisational efficiency/social dynamics. | **a, c, d** |
| | + A good working environment can influence the ability to retain staff. | **d, e** |
| **[F22] Resource access** | + University/department investment in space and equipment can have a positive effect upon social interaction/dynamics of research teams. | **a, b, c, d, e** |
| | - The inability to sustain access to resources can have a negative influence on Research Centre development. | **a, c** |
| **[F24] Investment stakeholders** | + The University/department commitment to the consolidation of research activity can be a positive influence on Research Centre development. | **a, b, c** |
| | + Research Council awards can enable academic staff to become research active. | **d** |
| | - Lack of personal commitment by Heads/Deans can create instability within research teams. | **c** |
| | - HEI financial difficulties can reduce the productivity of research teams. | **e** |
| **[F34] Demand for expertise** | + Demand for the Research Centre's knowledge and expertise can encourage HEI investment through recruitment/retention of research staff. | **a, b, c, d** |
| **[F35] Competition for staff** | - An imbalance of remuneration with the private sector can lead to the loss of experienced research staff. | **a, b, c** |

Table 11.3.3.1 Factors influencing the *axial concept*: CRITICAL MASS

The axial concept CRITICAL MASS (A5) was found to have been influenced by the following factors: [F14] **training and development**, [F15] **attracting/motivating staff**, [F22] **resource access**, [F24] **investment stakeholders**, [F34] **demand for expertise**, and [F35] **competition for staff**.

All the cases demonstrate the interdependence of the Research Centres' position within the faculty growing simultaneously with the ability to attract studentships, grants, research

[116] Often cited by authors as a means by which the small or micro enterprise can achieve growth (see Chapter 2).

contracts and external finances ($A_{24,25}$, $B_{18,21,22}$, $C_{19,22,25,27}$, $D_{22,27}$, $E_{27,29}$). The Research Directors recognise that acquiring research funding is an inherent part of their job and a basis from which to develop the research team.

**Training and development** ($F14^{a,c,d,e}$) can play an influential role in achieving a CRITICAL MASS of research staff. The analysis of Case D (Chapter 8) highlights the significance of the Research Director's Ph.D and subsequent supervision of research students who later became research leaders (CdLEBP, p.11). In addition, the use of **training and development** can be used to instil a culture of critical debate and learning within research teams. An open and participative approach can aid the ability of others to learn through example. Case D illustrates an approach to **training and development** that is intended to enhance the quality of critical debate and discussion amongst all research staff as much as it is intended to develop the individual.

> *'I think it is very important that everybody who works here is actually going to conferences, not just sitting there like a sponge but participating actively, giving presentations, contributing to the debate and we'd always support that, we'd always fund that and internally I would like to think that happens by osmosis…where younger researchers can learn from more experienced ones so there is a kind of peer group thing going on there and you know, I think if we take anybody on there is a kind of expectation that what we are all looking for is quality and you know, activity and critical appraisal of what we are doing so you know, what I have explained, part of developing proposals and projects would be discussing key issues from them in a critical way and that I think is part of not necessarily training but a cultural thing, being in a Research Centre.'*
> (CdSIPW, p.71)

However, the necessity to maintain technical skills, in particular, indicates a dilemma between investment in training and the inability to compete with salaries in industry. Case E illustrates the concern of the Research Director.

> *'I send staff off to conferences because to me that is staff development as much as the training element. I sent a girl off to six different fully funded two week sessions to be trained in the latest software…which has taken a lot of money and it is staff development. My fear with her is that she will be employed by industry and we are going to lose her so there are different layers to staff development and it is to do with*

*developing the whole person on one level and keeping informed as much as the training. It's both of those in our case.*
(CeSIMO, p.76)

Furthermore, **attracting/motivating staff** (F15[a,c,d,e]) is of particular significance in achieving and maintaining CRITICAL MASS. The Research Centres in Case A and C for example, both originate from the appointment of the Research Director who conducts *'various deals'* (CcLEFJ, p.2) with former colleagues, whereas Case D and E have developed their own research staff through a combination of promotion, staff development and new appointments.

Whilst the analysis of Case C (Chapter 7) has highlighted the importance of CRITICAL MASS to the achievement of a sustainable range of research interests and income streams, the operational effects of the *'dynamic'* (CdLEPW, p.29) are much harder to quantify. The account of the Senior Researcher in Case A may shed some light upon the importance of the social interaction between researchers so that an active and lively working environment is maintained together with clear career development opportunities.

*'We have become so small that I find it less interesting to work here than I used to. There used to be a lot more people working here although what we were doing was more diverse which actually made it more interesting for me as well…There should be more scope for promotion, taking on different research areas, more scope for learning from other people, more of a social life meaning I want to enjoy my work and environment as a stakeholder. Personally for me it has become too small and less social because of that…the extent of different initiatives happening creates a buzz and working with different people doing projects, even if you aren't working on it you get to see it happening within the Centre and it is good fun. A discovery almost of finding something new.'*
(CaSISF, p.211)

In addition, the location and working environment would appear to have influenced the factor **attracting/motivating staff** (F15[a,c,d,e]) and in turn enabled the Research Centre to achieve and sustain CRITICAL MASS. For example, Case D is located in an area of outstanding natural beauty (see Chapter 4) and not only retains all of its founding staff but many of its research students who have gone on to become research leaders. The Research Director highlights the significance of the location at Bainbridge by stating *'once you're here you go 'wow''* (CdLEPW, p.25).

***Resource access*** (F22[a,b,c,d,e]) is evident in the ability of all cases to locate staff in a dedicated resource (with specialist equipment and separate access from teaching areas). This is particularly important in the early development of Case B, and the need to access resources to service consultancy work in Case A which led to the relocation of the research group. However, as we have seen, continued resource access was not forthcoming in Case A and C due to a divergence of research agendas between the Research Director and the Head of Department/Dean. Whilst the differences were eventually resolved, it reinforces the point that as Research Centres strive to achieve CRITICAL MASS they are vulnerable to a lack of commitment by senior management through restricted ***resource access***. This is particularly so when the University is primarily teaching orientated. As described by the Research Director in Case C: *'When push comes to shove within Institutions which are largely teaching Institutions, the Research Centre will actually be the one that suffers'* (CcLEFJ, p.34).

Again the role of the **investment stakeholders** (F24[a,b,c,d,e]) is crucial to the continued development of the Research Centre and its ability to support its research staff. The Research Director in Case E is clear that there is a direct link between the ability to satisfy the University's stakeholders through the activities of the Centre and the likelihood of investment in renewing vacant posts.

> *'The University is no.1. They have a vested interest and you can see on any given year whether they allow you to replace vacant posts, so that is a fairly pragmatic and pretty mean response in one way. But that's the bottom line.'*
> (CeSIMO, p.119)

**Demand for expertise** (F34[a,b,c,d]) also has a significant influence upon the ability to achieve CRITICAL MASS. Case A, B and E have shown that demonstrable demand for specialist expertise was a contributing factor in the allocation and refurbishment of dedicated space and equipment for staff ($A_{4,6}$, $B_{3,8,11}$, $E_{6,7,12}$). Indeed, Chapter 4 has illustrated that the new Art and Design research 'market', promulgated through the RAE, had a direct impact on the formation and subsequent development of all the Research Centres. As the Dean reflected in Case D: *'it was a time of opportunity really'* (CdLEBP, p.13).

In addition, the ability to turn success in income generation into an efficient and sustainable research capability indicates an optimal size for the research group – created by having a research team of more than four people but no more than fifteen (as suggested in Case D). The ability to retain the research agenda through a 'critical mass' of research personnel insures against the risk of losing the knowledge base through any individual loss of staff

expertise ($D_{35}$). Furthermore, it ameliorates the potential for one income stream to disproportionately affect the Centre's viability.

> *'I think critical mass is very important. The sooner you kind of actually attain some sort of critical mass and maintain that the better. Otherwise, you're very susceptible to change. For example if one person leaves, you're lost, so the aim really was to build up the critical mass as quickly as possible. For us, when you've got round about half a dozen people you've got something like a critical mass.'*
> (CcLEFJ, p.43)

Here, the Research Director in Case C draws upon his prior experience and is clearly aware of the effect of CRITICAL MASS, particularly the need to remain in control of his new environment (see section on GAMESMANSHIP). Conversely, in Case E, the financial crisis within the University resulted in the Research Centre and the Art and Design department being seen as a liability (CeSIHT, p.136) due to the Centre's dependency on University investment.

Yet, growth in the regional economy can lead to **competition for staff** ($F35^{a,b,c}$), Case B illustrates that the ability to develop highly trained specialists can threaten the ability to retain research expertise due to the inability of the public sector to compete with remuneration packages available in industry ($B_{20,23}$).

> *'Most notable problem that we have got is the one that happened about two years ago where five members of staff left at once because they had been made an offer that they couldn't refuse by another company. Within the Centre we are able to grow some very exploitable skills and knowledge and that often does get recognised and some of the more avaricious companies will try and acquire it. Fortunately for them, not for us, they have an opportunity for doing that in terms of the sort of positions they can offer and the salaries they can provide. We obviously have to abide by salary schemes that the University offers. They do lag behind the best commercial rates.'*
> (CbSIBP, p.184)

The loss of experienced researchers can also have an adverse effect upon research performance through a change in social dynamics ($A_{12,13}$, $B_{23}$). For example Case A demonstrates that the departure of the founding Research Centre Director resulted in a period of 'disarray' before a new leader was able to implement a revised research strategy ($A_{16}$).

### 11.3.4 Comparison with existing literature: CRITICAL MASS

Tornatzky *et al.* (1999) and Harvey *et al.* (2002) suggest that a key role of the Research Director is to **attract/motivate staff** and in the management text on small business growth, Storey (1989) highlights the problem of **competition for staff**. Case A and B both suggest that Universities are not well placed to retain the skills of highly trained research staff when subject to competition from industry and it is the working environment and the sense of being at the 'leading-edge' of the field which is important. Whilst the discussion of competition for staff within the small business text appears to concur with many of the findings from this study it does not adequately explain the barrier to the appointment and retention of appropriately qualified staff created through a **demand for expertise**. Case A and B both demonstrate that the demand for labour is linked to market forces – in this case a lack of new product development skills in an area of high regional investment within manufacturing industry[117].

Tornatzky *et al.* (1999) in particular, points to the ability of the Research Director to engender loyalty by demonstrating integrity and honesty – to **attract/motivate staff**. This was clearly evident in achieving CRITICAL MASS in Case A and C whereby the research staff identified their career development with the Research Director instead of the University. Harvey *et al.* (ibid) also argue that trust is a critical ingredient for good social relations within the research group which in turn, enhances performance. Interestingly, Case E is a particularly good example of how poor social relations can reduce performance when there is a lack of trust in the Research Director's authority, due to a conflict of responsibility as Head of Department during a period of financial instability.

**Training and development** have featured heavily in the literature on Research Centre development (DORCISS, 1995; Arnold *et al.*, 1998; CVCP, 1999; Whiston, 1990; Whiston, 1995) and in the development of SMEs (for example Gaskill *et al.*, 1993). All the Research Directors studied had achieved personal distinction in their respective research specialisms and were seen as magnets for researchers keen to pursue a career in the field. Indeed, many of the senior researchers interviewed had been supervised by the Research Director during their research degree and had become research leaders. Equally, the Research Directors in Case A, B and D all recognised greater career opportunities through research over teaching. The research reinforces findings by Henkel and Kogan (1996), Court (1999) and the Dearing

[117] This highlights an area of divergence between the cases as the near market focus of the 'design' orientated Research Centres, through consultancy and training services, differs from the 'arts'

report (1997) that suggests promotion within HE is greatly enhanced by research performance.

The concerns raised through the CVCP (1999) and Whiston (1995) studies which identified substantial weaknesses in the career development of researchers appears to be borne out in Case A where tensions over the designation of posts and problems of **resource access** were clearly detrimental. The use of the CVCP concordat to improve research careers also appears to have had limited impact or indeed awareness[118]. Yet, the majority of the cases studied had responded to the need to develop and retain staff by establishing research training programmes for new staff (as well as some teaching staff) along with clear job descriptions and appraisal processes to further research performance – for example Case D had appointed a research output co-ordinator to specifically support staff undertaking publication or exhibition. Here, the Research Centre repays its **investment stakeholder** by promoting a research 'culture' within the department. However this is not universal as Case C demonstrates – research capability did not lead to knowledge dissemination at programme level.

Many of the studies concerning Research Centre development have also considered the role of the Research Director in developing a 'team culture' (DORCISS, 1995; Arnold *et al.*, 1998; Tornatzky *et al.*, 1999; Harvey *et al.*, 2002) however, only Martin and Skea (1992) and Bordons *et al.* (1995) have considered the effect of research staff numbers on research output. Case C exemplifies the importance of a CRITICAL MASS of research staff to the achievement of a sustainable range of research interests and income streams and Case D reported a 'dynamic' when four research staff had been appointed. In contrast, Case A, through the comments by the Senior Researcher (see above), indicates that a smaller number of research staff had led to a reduced social interaction and limited opportunity for development and promotion.

Martin and Skea (1992) found that there was a potential for reduced performance when groups grew to larger than six or seven researchers. Bordons *et al.* (1995) found there was a link between high productivity (publication) and four researchers in a team, which appeared to sub-divide beyond an aggregate size of 5.7. The findings from Case D would resonate with

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orientated Research Centres which do not have such a direct relationship with their regional economies. These differences are discussed further in the following Chapter.

[118] None of the research staff interviewed in this study were aware of the CVCP concordat and interestingly, the Research Directors were equally unaware of the work of the Directors of Research Centres in the Social Sciences.

this analysis as a ‘cluster’ structure had been introduced to take account of increased social interaction and efficiency in smaller groups.

This research is therefore consistent with Martin and Skea’s and Bordons *et al.*’s findings that research groups have the potential to ‘take off’ in terms of research income, social dynamics and operational efficiency, when they reach a total of four or more research staff. In addition, the research would suggest that growth in research teams needs to be managed – into ‘clusters’ of four or more but less than six or seven, to maintain efficiency, social cohesion and social representation through a clear research agenda.

## 11.4 Development

### 11.4.1 Factors influencing the axial concept: GAMESMANSHIP

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F2] Strategic vision** | - A strategic vision for the Research Centre which runs contrary to that of the department/University can have a negative influence.<br>- A strategic plan determined by the Head/Dean can undermine the Director's authority. | **a**<br>**c** |
| **[F4] Risk taker/ uncertainty bearer** | + Challenging authority in order to re-gain senior management commitment can act as a positive influence. | **c** |
| **[F6] Synergy with HEI research policy** | + Personal research objectives that are synonymous with department/University agendas can have a positive influence. | **a, b, c, d** |
| **[F23] Overhead costs** | + University/department contribution toward overheads can aid the sustainability of the Research Centre. | **b, c, d** |
| **[F24] Investment stakeholders** | + HEI competitive advantage through research can enhance the Director's ability to negotiate further resources for development. | **a, c, d** |
| **[F27] Partnerships/ dependency** | + The Research Director's ability to secure support from a senior 'champion' can have a positive influence on development.<br>+ Research Centre development can have a positive influence upon the HoD's career.<br>- Pressure on resources can have a negative effect upon HEI investment for research. | **a, b, c, d**<br>**d**<br>**c, e** |

Table 11.4.1.1 Factors influencing the *axial concept*: GAMESMANSHIP

The axial concept GAMESMANSHIP (A6) was found to have been influenced by the following factors: [F2] **strategic vision**, [F4] **risk taker/uncertainty bearer**, [F6] **synergy with HEI research policy**, [F23] **overheads**, [F24] **investment stakeholders** and [F27] **partnerships/dependency**.

The Research Director's **strategic vision** (F2[a,c]) can lead to a divergence of agendas at departmental/faculty level during the development of the Research Centre. This period of conflict can result in GAMESMANSHIP between the Head of Department/Dean and the Research Director. The strategic planning process which aligns Research Centre objectives with departmental/faculty research strategy in Case B and D for example, is replaced by a struggle for autonomy and control.

Chapter 5 highlights research activity which was *'difficult to square within the University'* (CaLEJT, p.12) and Chapter 7 indicates that *'the Dean's activity was either destructive or*

*indifferent'* (CcLEPW, p.34) when the Research Director would not yield to the new Dean's strategy.

In Cases B and D the strategic direction of the Research Centre under the leadership of the Research Director, is entirely congruous with the faculty and resource access is assured through mutual objectives ($B_{24,27}$, $D_{18,20,26}$). The Research Centre acts as mechanism for staff within the faculty to engage with research and as a dissemination point for reflective methodologies in the subject practice ($B_{25, 30}$, $D_{28}$). However, in Cases A, C and E, as the profile of the Centre grows in accordance with the need to promote itself to external stakeholders, the synergy of research agendas at faculty level is not maintained ($A_{14,15,17}$, $C_{16,17,19,20,21}$, $E_{20,22,24}$).

Tensions arise in the ability to maintain senior management support to consolidate the Centres' growth when new Deans are appointed (CcLEFJ, p.114-135). The Research Director in Case C and the former Research Director in Case A feel let down by a change in research strategy at faculty level and seek to retain autonomy and influence ($A_{19,20,21}$, $C_{13}$). With these tensions not resolved, the Research Director in Case C negotiates with the hierarchical level above his Dean – through the Vice Chancellor – to establish a Research Institute ($C_{24}$). He is able to realise his personal investment within the wider research community. The recognition of his value to University research standing is such that his authority and autonomy is reinforced ($C_{27,34}$).

> *'throughout all of that kind of uncertainty, one thing that didn't waver was the Vice Chancellor's commitment…Recognising that it had researchers who had a significant track record, were internationally known and so on and offered one of the areas within which research within the University could actually develop.'*
> (CcLEFJ, p.32-33)

Interestingly, Case A and C had Research Directors with previous experience of leading a research group. It would appear that when their authority is brought into question they utilise skills of tactical awareness (value within the wider research community), political nous (ability to secure senior management support) and tact (to negotiate further resources for development) to retain control of their research interests. They may be less inclined to adhere to departmental strategies that are not in accord with their own research interests and more inclined, due to their experience, to challenge the Dean/HoD's authority. In addition, the extended period of strategic non-alignment at departmental level in Case C – operating largely independently of the School for about two years (CcLEFJ, p.24) – supports the view

that GAMESMANSHIP may require a Research Director to be a **risk taker/uncertainty bearer** ($F4^{c}$).

Whilst the Research Director may be willing to engage in tactical positioning at departmental level, it would appear that there must be an underlying **synergy with HEI research policy** ($F6^{a,b,c,d}$) for the Research Centre to continue with University endorsement. Indeed, all cases demonstrate that compliance with University research policy is implicit during the formation of the Research Centre through the *axial concept* INTRAPRENEURSHIP.

Case C illustrates that GAMESMANSHIP may depend upon the continued value placed upon the Research Centre within the University's overall research strategy.

> *'We became quite separate from the Faculty…the University wanted to develop a number of areas of research excellence and that was our job to do this. That was in some respects quite a simple job for us and they would have been quite happy if for example it had not involved masters students, possibility of undergraduate degrees and so on. We fitted in quite well with the University strategy.'*
> (CcSIFJ, p.44)

This particular point also gives rise to another issue, the role of the **investment stakeholders** ($F24^{a,c,d}$) in respect of the department and University who seek to achieve competitive advantage. It can be argued that the Research Director in Case C was able to transfer his line management responsibilities beyond the authority of the Dean precisely because of the pressure in the sector for the University to demonstrate research capability ($C_{23,26,32}$). In addition, Case A would suggest that the need to quantify the role of the University regionally has led to the Research Centre being seen as a *'shop window to the industry'* (CaLEJT, p.49).

In respect of financial investment and contribution to **overhead costs** ($F23^{b,c,d}$), arrangements between the University and the Research Centres vary. Case B indicates an annual contribution of 10% toward (CbLEBP, p.73) the cost of overheads which is reviewed annually against income and expenditure. Case C illustrates the underlying financial arrangement between the host institution and the Research Centre.

> *'As far as the senior managers were concerned, they clearly wanted us to break even, but they were looking in the long term for us to actually make a contribution to overheads more than anything else because basically we're actually treated quite generously by the University so we were breaking even only in one sense that we didn't*

*actually directly cost them any income but they were actually providing support, overhead support.'*
(CcSIFJ, p.52)

Crucially, the Research Centre needs to translate financial and resource investment made by the University into a 'champion', able to protect the Centre's interests at senior management level and able to negotiate additional resources for development. GAMESMANSHIP therefore requires the Research Director to identify and maintain appropriate **partnerships/dependency** ($F27^{a,b,c,d,e}$). All cases indicate the importance of the 'champion' and the quotation below from Case D is typical of their role.

*'we have got somebody who has a real understanding and is an enthusiast and is very quick to understand the implications for the School. He is very much a kind of champion which you have got to have – these key people – otherwise you've had it because we are not represented on every committee and the kind of committees that make the difference, like within the University, you have got to have people… it is absolutely vital otherwise we wouldn't develop, we'd be marginalised and we'd soon suffer.*
(CdSIMS, p.140)

The role of the 'champion' and the part they play in GAMESMANSHIP is not purely altruistic. The career prospects of the senior manager concerned are enhanced by the ability to bridge a gap in research performance ($D_{18}$). Using the example of Case D, the Head of Department's promotion to Dean is cited as a direct result of success in the RAE (CdLEBP, p.9). Indeed, the same relationship appears to be evident in the promotion of the Head of Department in Case A and the Research Director to Head of Department in Case E ($A_{29}$, $E_{18,19}$). Although this development ultimately has a negative effect upon the development of the Research Unit in Case E due to a conflict of roles (combined HoD and Research Director) when the closure of the Art and Design campus is threatened and no real 'champion' is evident to represent its interests ($E_{23,24,25,26,27}$).

*'The last Vice-Chancellor didn't have a good word to say and wanted to close our campus down…There was a couple of years where we were in the red; people were retiring and such. There was a University wide problem to do with the number of students being taken on in one year. That really put morale down.'*
(CeSIDU, p.136-214)

### 11.4.2 Comparison with existing literature: GAMESMANSHIP

The ability of the owner manager to demonstrate **strategic vision** has been suggested as a positive factor in the development of the small enterprise (for example Gaskill *et al.*, 1993; Gibb and Davies, 1990). Yet, there is a limited empirical work which has gone further to explain the 'tactical' skills which relate to the bureaucratic or post-bureaucratic (Henkel, 1997) context of Higher Education. Goffman (1959, 1967, 1970) has provided an interesting view on the ability to manipulate the presentation of self through social interaction to further ones ends. This concept of tactical representation or 'gamesmanship' is reinforced by earlier findings based upon this research which suggested that Research Directors were able to progress their careers through attributes such as political nous, strategic awareness and micro-political skills (Roworth-Stokes and Perren, 2000a).

Henkel (1997) has indicated a shift toward a post-bureaucratic management structure in Higher Education through flexible forms of organisation with the balance of duties of staff increasingly weighed on the basis of output potential. In terms of research this has manifested itself through fixed term project related contracts, research-only contracts and roles 'freed-up' of administrative loads to meet strategic aims. This research endorses Henkel's findings but goes further to suggest that Research Directors have become aware of the potential to exploit this new context of 'new public management' and equally, have developed skills of **risk taker/uncertainty bearer**.

For example all cases demonstrate the Research Directors aptitude to 'sell' the value of the research undertaken, the profile of working with the research councils and industry clients, and the 'credentials' of those undertaking it to internal stakeholders. When the Dean (for example Case C) becomes reluctant to value this activity due to pressure on resources, the Research Director manipulates the desire of another senior 'champion' (the Vice-Chancellor) to achieve his own agenda – demonstrating an adroit political awareness. In effect, the departmental manager's authority may be constrained by the greater good of the University, if the Research Director's strategic direction of the Centre retains synergy with the University's overarching priority to enhance research output.

In addition, the nature of academic endeavour and the predominance of peer review to assess performance by discipline (RAE and Subject Review) have meant that academics direct their loyalty toward their subject discipline as opposed to being professionally or corporately minded. Kerr and Jermier (1978) have suggested that this can significantly limit the effects of **investment stakeholders** to initiate new tasks or persuade staff to take on additional

responsibilities. Whilst this appears to have resonance with the findings as they relate to the Head/Deans of Departments, this study would suggest the opposite for the Research Director. For example, the Research Directors in Case B, C and D in particular, clearly command immense respect, loyalty and allegiance commensurate with their role as Research Directors and status as eminent researchers in the field.

Figure 11.4.2.1 overleaf shows the power relationship between the Research Centre Directors and their organisations identified within an earlier analysis of this data (Roworth-Stokes and Perren, 2000a). It highlights the influence of the Research Centre Director and the changing balance of organisational autonomy and authority as the Research Centre develops.

Hence, this research supports the views of Zaidman (1997) who argues that **synergy with HEI research policy** and decisions over research resources by senior managers, cannot be made without consideration of research groups' own beliefs, interests, size and degree of authority[119]. Indeed, the individual focus of selectivity within the RAE has strengthened the Research Director's tactical advantage in this respect and weakened the University's control over the **partnership/dependency** as the Research Centre develops.

[119] Whilst this appears to be true for most cases, Case A indicates that a competitive internal structure (several Research Centres competing for resources) and limited powers of authority for the Research Director can still enable effective research output to national and international standing (see Chapter 4 for operational context).

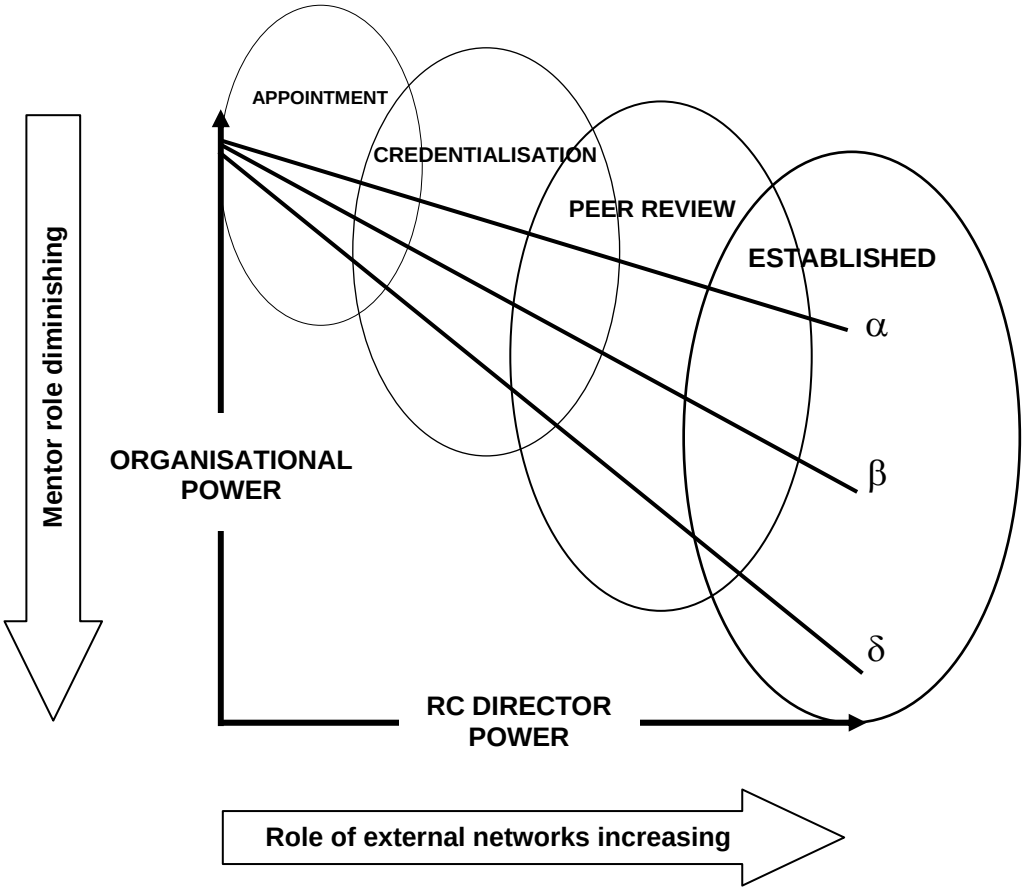


Figure 11.4.2.1 Power orientation during Research Centre Director career development (Roworth-Stokes and Perren, 2000a, p.141).

### 11.4.3 Factors influencing the axial concept: KNOWLEDGE CAPITALISATION

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F12] Pricing policy** | + A carefully structured pricing policy can reinforce the value of the Centre's knowledge to clients. | **a, b, c, d** |
| **[F29] Marketing plan** | + Targeted information about the Research Centres expertise/knowledge to key client groups can be a positive influence on development. | **a, b, c, d** |
| **[F30] Image and reputation** | + Careful attention to the way the Research Centre is perceived by key audiences can be a positive influence on development.<br>- The inability to derive a coherent research portfolio can have a negative impact on exploitation of market opportunities. | **a, b, c, d**<br>**e** |
| **[F31] Client handling** | + Responsiveness to client needs can increase the opportunity to capitalise on new research opportunities.<br>+ Relationships with clients can be enhanced through recognition of the researcher's self interest. | **a, b**<br>**c** |
| **[F32] Diversification strategies** | + Utilisation of knowledge through new programmes and/or services can be a positive influence on income generation. | **a, b, c, d, e** |

Table 11.4.3.1 Factors influencing the axial concept: KNOWLEDGE CAPITALISATION

The axial concept KNOWLEDGE CAPITALISATION (A7) was found to have been influenced by the following factors: [F12] **pricing policy**, [F29] **marketing plan**, [F30] **image and reputation**, [F31] **client handling**, and [F32] **diversification strategies**.

The aptitude of the Research Centre to quantify the value of its expertise through a **pricing policy** (F12$^{a,b,c,d}$) furthers the concept of KNOWLEDGE CAPITALISATION. Case A had specifically developed a pricing methodology because it had experienced a perception in industry that using University services would be *'cheap'* (CaLEJT, p.89). All the Research Centres, except Case E where little commissioned work was undertaken, used the Research Council funding methodology as the basis for developing a **pricing policy**. However, the experience of the Research Director added an additional cost calculation – the extent to which the client was able to pay! Case A is a useful illustration.

> *'For any piece of work we will always cost it and price it. We will work out what the cost of the manpower is. The way we do our projects is that we usually work to a day rate and work out what the project is going to cost on that basis. There is a certain element of pricing that goes on as well in terms of how much an organisation will pay for the work as well as what the basic cost is. That reflects itself in what the actual day rate is that we charge them. Obviously, of course we work the projects out according to a EPSRC formula of costing but that's when they are outside that formula we do it on a*

*day rate basis. It's quite intuitive recognising how much they are willing to pay. It depends on what the benefits are for that organisation. Whether they can get the same expertise elsewhere. All sorts of different things. Experience, an audit of the registration numbers in their car park!!!'*
(CaSIJT, p.57)

A **marketing plan** (F29[a,b,c,d]) also appears to be influenced by KNOWLEDGE CAPITALISATION. For example in Case C the current marketing plan is driven by a need to secure income through research students recruited onto courses designed to capitalise on the Centre's expertise and knowledge.

*'For specific things one would market them in a traditional way e.g. postgraduate students would be marketed through scattergun marketing of the University etc. Other kinds of marketing were organising international conferences. Sometimes we would go out to the Far East and arrange a series of seminars and presentations and market ourselves in that way. Trying to use the activities we are actually engaged in as a way of marketing like having targeted certain conferences try and get five or six people.*
(CcSIFJ, p.144)

However, a common response to the question concerning marketing highlighted the belief that the Research Centres were not fully capitalising on their knowledge. Whilst all Cases demonstrated web-sites, promotional leaflets, brochures and in Case D a CD Rom, marketing was thought to be reactive as opposed to pro-active. The Research Director in Case B suggested this would improve with a dedicated marketing role within the Centre.

*'I think we are not particularly good at marketing. It's something we know is probably one of our biggest weaknesses…That may be changing because one of the ways in which we are due to develop in the next year is to take on somebody who has prime responsibility for business development. At the moment it tends to be a shared responsibility for different staff although for two of our staff that is part of their remit…Someone who is part of us rather than someone acting for the University representing lots of different interests. The way we have done it in the past are to advertise ourselves through a brochure. We have our own website, we give numerous talks both regionally, nationally and on occasion internationally as well where we represent our work as a context of the work of the University and the department. Fundamentally we tend to not promote ourselves but it happens by default as a result of*

*the work that we do. A reputation comes from that and whether that leads to referrals and to continued work with the organisations on an ongoing basis.'*
(CbSIBP, p.94)

**Image and reputation** (F30[a,b,c,d,e]) is influenced by KNOWLEDGE CAPITALISATION in that the Research Centre seeks to capitalise on a separate image to that of the University. Case C illustrates the importance of promoting a separate image when the research rating of the overall University may not reflect the level of expertise and the knowledge within the Centre (CcSIHT, p.149).

In addition, the opportunity to portray a separate **image and reputation** can be used to highlight the quality of service and the 'professionalism' of the work undertaken. The Research Director in Case B is keen to point out that the Centre is recognised as a discrete unit within the University with services targeted toward industry.

*'The external, commercial environment perceives us to be a discrete part of the University that have a professional approach to what we do and that we are commercially aware but I think they do realise that we have this academic image to what we are about. They quickly understand that we are not about 'making a fast buck' we're there to stimulate and develop things on a continued basis not just for that company but more for the development of design.'*
(CbSIBP, p.144)

KNOWLEDGE CAPITALISATION also appears to be influenced by **client handling** (F31[a,b,c]). Indeed, it can be argued that the whole process of 'gearing up' (as described by Frayling, 1993) for research following the 1992 RAE was an attempt by Universities to become responsive to new client demands. It is clear that the Research Centres have not only structured themselves around the need to report on research outputs but also the need to work with multiple client groups who have differing requirements. The account of the Research Director in Case B illustrates the sensitivity to clients needs across the public and private divide.

*'There are different cultures of operation for the public sector, for the European community projects and for private sector. There are different response times that are needed. They are all different administrative processes that are needed and we have had to adapt and understand these differences to become effective at it. That is not an easy learning process. What for instance is the order of the day when dealing with an*

*external company? A manufacturer would not be the right approach to the European community and vice versa.'*
(CbSIBP, p.156)

The Research Director in Case A also indicates a 'snowball effect' when the ongoing needs of clients can be achieved through new projects.

*'It's been very effective identifying the future for certain projects in the Centre. The training programme for the teaching company directorate. We're now looking at a best practice network for the people we have trained up and it's been totally driven by asking the customers what they would want next after this project finishes. A snowball effect.'*
(CaSIJT, p.162)

The Research Director in Case C indicates a cautious tone in respect of responding to client needs. He sees a tension in the process of KNOWLEDGE CAPITALISATION being driven through client demand unless it is carefully considered and of mutual benefit to the research activity in the long term. The following illustration would suggest that researcher interest and motivation are key ingredients in achieving viable research project proposed by clients.

*'There were things that we wanted to do…because we were interested in them having a practical application, so that would be something we had in mind but generally speaking it was a matter of saying this is what we can do and we think it is of interest to you. Are you interested in it? Or they would come to us and say we would like you to do this, are you interested in it? We didn't actively ask people what would you like us to do?… you would certainly talk about where you're going…That comes down to the selfishness to a certain extent of the researchers. Their primary motivation is to be doing something that they like doing. Exploring the ideas that they think are interesting and worthwhile.'*
(CcSIFJ, p.162)

Diversification of services which seek to exploit the expertise and knowledge of research staff is also evident through the factor **diversification strategies** ($F32^{a,b,c,d,e}$) ($A_{30,34}$, $C_{30,33}$, $D_{33,34}$). This was particularly important in Case A as internal competition for resources grew when new Research Centres formed ($A_{17,18}$).

All Cases demonstrate the continuing development of activities in response to local, regional and national developments – such as the growing number of Teaching Company Schemes supervised by Research Centre staff in response to the regional economy. Case D provides an example of a new postgraduate programme developed specifically because staff expertise ($D_{30}$) was been utilised externally without any tangible (financial) benefit to the Research Centre.

> *'we decided to start work on a new course called a research masters course and the idea behind that was that we – myself, Rachel and Paul – were increasingly being asked to supervise externally and also a lot of people were coming to us for advice and we thought "well this is becoming a bit crazy really, we need to try, we're giving away an awful lot here and we really ought to try and formalise it and then we can make it work for us'*
> (CdSIMS, p.9)

The development of postgraduate programmes designed around the staff expertise also supplements annual RAE funding and aids progression to research degrees.

> *'We did create a masters degree partly as a way of actually creating a base for Ph.D students but also because it provided us with an income base as well but also because it actually generated trained individual who would go out in the Institute and develop the field and that in itself would generate links with companies. There is a multitude of factors and really you are trying to make all the conflicting factors balance out.'*
> (CcSIFJ, p.12)

The Research Centres in cases B and D consolidate their role through the development of activities to improve the research culture at faculty level ($B_{28,31}$, $C_{24,25,29}$). They seek to exploit the potential of emerging research themes into new areas of enquiry. Research leaders co-ordinate 'clusters' of research active staff to reinforce the integration of research with teaching across the department ($B_{25}$, $C_{32}$).

> *'we were kind of trying to continue the thread…through the sustainability of a research theme and that was important that point you could begin to see that yes, we were interested in a couple or three obvious clusters of research…We had what we call 'away-days' where everyone gets together and we brain-storm and crystallise it into some sort of strategy…You've got to take people with you…it is important that*

*everybody believes passionately in the value of research...and you know we've tried to I suppose just not force it – I believe in growing research.'.*
(CdLEPW, p.33)

All cases demonstrate influence to inform University research policy (by the Dean in case A as opposed to the Research Director) within the context of overall research performance ($A_{32,33}$, $B_{29,32}$, $C_{32}$ , $D_{31}$, $E_{30,32,33,34,35}$). In Case B and D the Research Directors have a formal responsibility for faculty research strategy. They aim to instil a 'critical' research culture by supporting informal research groups, facilitating communication, and reducing the administrative and management burden on other researchers.

*'One of my jobs is to look after research for the faculty …We have two other research groups of critical mass in the faculty and these operate within a broader umbrella…The remit of which is to organise and manage all research activities in all disciplines and all postgraduate activities and within that groups that have a critical mass… The Industry Research Centre acts as an administrational centre for all the centres…it is quite a fluid relationship and it mirrors federal commercial and industrial organisations that are operating in the private sector now as bigger groups spin out new companies all the time.'*
(CbLEBP, p.34)

### 11.4.4 Comparison with existing literature: KNOWLEDGE CAPITALISATION

Zaidman (1997) has suggested that the linking of goal orientated planning to academic research is a relatively recent phenomenon within the last 10 to 15 years and this has led to forms of **client handling** for research and knowledge transfer services provided by Universities. As discussed in the section above on OPPORTUNISM, the influence of research assessment has had a profound effect upon the investment, management and co-ordination of research activity in Universities. Cave *et al.* (1997) has suggested that these policy changes have led to the management of research through the development of systems to monitor publications, research grants and studentships, research contracts and professional advocacy. This research concurs with Cave *et al*. (ibid) but reveals the sophistication of the systems employed to manage the 'knowledge production' process through investment (whether financial or physical resource), operational (project management) and evaluation (assessment of the outcomes). For example, Case E uses financial input (through a research fund available to staff to relieve them of other duties) as a means to quantify the 'research benefit',

successful projects are then overseen by a research co-ordinator, and finally, the researcher is subject to a report on the publication outcomes.

Use of the internet (for external promotion) and intranet (for e-mail communication, monitoring systems and support services) also features highly in all the cases. Case B for instance, has utilised the intranet to create a virtual research environment which, in addition to on-line records of research output, information and communication rooms, news updates of research projects, provides links to research councils and research funding bodies for staff in the department who want to secure additional research funding.

This approach resonates with the relatively recent text on 'knowledge management'[120] which has stressed the need for technology to be geared toward the requirements of knowledge workers to access suitable research resources and for sponsors to readily utilise knowledge solutions (e.g. Ruggles, 1998; Bassi, 1997). However, Gumbley (1998) and Robertson and Hammersley (2000) have criticised the rather simplistic notion that technology is the means by which knowledge can be effectively produced and distributed due to the need for human and social aspects to be taken into consideration. In particular, this study found that a lack of trust in leadership (Case E) had led to poor communication of research being undertaken and limited opportunity to evaluate the quality of work being produced. Conversely, the organic development of Case B and D, and the loyalty and regard for the Research Centre management might explain the use and compliance with the intranet based systems as a means of sharing knowledge. Therefore, technical systems in themselves may only provide a means to facilitate effective knowledge production and dissemination. This research would suggest that a combination of trust in management and the intended purpose for the knowledge, as well as good social interaction (as suggested Robertson and Hammersley, 2000), may be necessary ingredients to its successful implementation.

In addition, KNOWLEDGE CAPITALISATION is intrinsically linked to CRITICAL MASS as discussed above through the ability to attract and retain research 'talent' or 'knowledge workers' as often cited in the knowledge management text. When asked to identify the major assets of the Research Centre within the semi-structured interviews, the experienced research staff were invariable cited as the key resource of the Centre.

[120] Gumbley suggests that 'knowledge management' is the latest 'buzzword' for a long line of management strategies to harness employee knowledge such as 'expert systems' and the 'learning organisation'.

The cases suggest that the ability to capitalise on the knowledge of key personnel requires a balance to be struck between personal fulfillment (through high levels of autonomy and responsibility) and the need for regulation and control at departmental level. In this respect, this research supports the view of Robertson and Hammersley (2000) who found that knowledge workers (in management consultancy firms) are expected to act with a high degree of responsibility and autonomy which, if not forthcoming, would result in the departure of key staff.

> *'Any attempt by management to curtail individual autonomy or directly control work is most likely to be met with swift exit from the firm. In addition, competitors will constantly be attempting to entice knowledge workers from their rivals, such is the scarcity of their skills and expertise.'*
> (Robertson and Hammersley, 2000, p.241)

From a macro perspective, the Government has driven an agenda for knowledge transfer and has stressed the need for Universities to contribute to the economy by becoming active participants in national innovation and systems. The HEFCE has responded accordingly and encompassed within its funding budget so-called 'third-stream' funding alongside teaching and research to facilitate knowledge transfer activity between Universities and business and community organisations.

> *'The White Paper on enterprise, skills and innovation, 'Opportunity for all in a world of change', recognises the crucial role of HEIs in the economy as powerful drivers of innovation and change…some as world class centres of research excellence and players in global markets; others primarily as collaborators with local businesses and communities, and with regional bodies. Institutions must choose the role which best suits their strengths. Public funding encourages such choice, by providing incentives for institutions to become more entrepreneurial, build closer links with business and the community, and have proper arrangements for exploiting the results of their work.'*
> (HEFCE, 2001b, p.5)

Zaidman (1997) recognises that this can create a difficult balance to be struck between knowledge transfer activities toward governmental and industrial research priorities on the one hand, and maintaining highly academic, non-commercial research on the other. The cases do suggest that strategic planning took account of the need to invest in empirical research whilst attracting income through knowledge transfer services. Yet Zaidman's view of these activities being in potential conflict with each other is not entirely borne out by this research.

For example, Case B specifically sought new product development work with medical companies so that they could investigate ergonomics, product performance and the latest advances in manufacturing processes, in greater depth rather than be subject to short term 'jobbing' work. Therefore, the vocational basis to Art and Design research may not be entirely incompatible to the knowledge transfer agenda, indeed Case A and B had adopted as positive stance toward these activities by seeing themselves as 'research-led' design consultancies.

Zaidman (ibid) and Harvey, *et al*. (2002) recognise the need to use **diversification strategies** and this is also supported by Gibb and Davies' (1990) through the need to balance design and development with appropriate pricing to sustain small business growth. This study has revealed the Research Centre's sensitivity to client needs (both internal and external) through the development of postgraduate taught programmes (Case C and D), interactive learning products (Case B and D), and training materials and short courses (Case A and C). Indeed, in a similar vein to the text surrounding small business development, the motivation behind the development and diversification of products and services appears to be income related[121] but the use of a **pricing policy** appears to have been influenced by a need to reinforce the 'professional' nature of the activity. For example Case A indicates its 'near market', 'research led consultancy' approach to industry was undermined by the perception of University services as 'cheap'. Hence the ability to determine pricing levels becomes a device to reinforce the credentials of the knowledge and services available through the Research Centre.

Shamir *et al*., (1993) have suggested that a key function of leadership is to create the 'social identification' of the research team in order that staff have a sense of purpose and association with other team members. The section on FORMALISATION above has highlighted the need for the Research Centre to develop its own information and management systems to represent itself effectively to clients. However the need for the Research Centre to create its own 'identity' – both socially constructed and externally represented – requires further examination in respect of the existing text surrounding Research Centre development. Tornatzky *et al.* (1999) have stressed the importance of the leaders ability to influence researchers in pursuit of the Centre's agenda to establish a cohesive **image and reputation –** often achieved through informal influence[122]. Whereas Arnold *et al.* (1998) and DORCISS (1995) have argued that the Research Centre identity should be reinforced to stakeholders

[121] See for example Case C and the need to sustain the revenue through a variety of income streams as the Research Centre developed into a Research Institute.

through regularly updated **marketing plans** to achieve effective publicity material, PR case studies, newsletters and mailing lists.

In essence, this study found that both forms of identity were in evidence. The Research Centres in Case A, B and D were very aware of their visual identity – logos, printed brochures and the clear demarcation of physical space – and the Research Centres in all cases demonstrated the influence of the Research Director in establishing a vision and a philosophy which sought to identify a unique methodological stance for the research undertaken[123]. However, the significance that Arnold *et al.* (1998) and DORCISS (1995) appear to place on the external forms of representation over internal forms of identification, do not fully represent the complexity of identity seen within this study. In Case A for example, a major crisis of identity occurred due to a lack of synergy with the departmental research agenda which resulted in a sense of instability felt by the staff. Indeed, Case E appears to have concerned itself not with an external identity but with trying to re-establish the internal identity of the former Design Research Centre in the newly merged Art and Design Research Unit[124].

Therefore, research standing or sustaining Research Centre development is not necessarily dependant upon a strong external image and identity. The internal identity and the necessity to achieve 'shared values' appear to have greater influence. A simple explanation for this could be the quasi-market in which Research Centres operate and the dependence upon the host organisation for consistent resource access and support during development[125]. Furthermore, the tangibility of the 'market' and the need to communicate services effectively is only evident in the 'near-market' Research Centres (Case A, B and C for example), whereas all cases stress the importance of appropriate representation on regional and national funding bodies to represent the Research Centres'[126] interests.

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[122] Due to the constraints of authority within the public sector (e.g. loyalty toward discipline as opposed to organisation).
[123] Usually through a mission statement which was cited on various forms of publicity material.
[124] Due to the merger of two faculties and the establishment of a combined (fine Art and Design) research unit.
[125] Discussed further in the section on OPPORTUNISM.
[126] Discussed further in the section on NETWORKING.

### 11.4.5 Factors influencing the axial concept: NETWORK CONNECTIVITY

| *Factors identified* | *Nature of influence* | *Case references* |
|---|---|---|
| **[F25] Policy influence** | + The representation on key national funding bodies (e.g. RAE panels) can have a positive influence on the opportunity to access funding.<br>+ Ability to inform/determine University research policy can have a positive influence on Research Centre development. | **b, e**<br>**a, b, c, d** |
| **[F26] Industrial input** | + Links with regional industries can have a positive influence upon access to 'knowledge transfer' funds (e.g. ESF).<br>+ Involvement from external parties can inform new products/services. | **a, b, c**<br>**a, b** |
| **[F28] HEI networks** | + Supportive networks across the University/department can lead to new research contracts/links with industry.<br>+ The personal networks of the Research Director/Head/Dean can attract key research staff to the Research Centre. | **a, b, d, e**<br>**a, c** |
| **[F40] Public funding strategy** | + Effective use of networks to inform/influence Government strategy toward research funding can have a positive effect upon development. | **a, b, e** |

Table 11.4.5.1 Factors influencing the *axial concept*: NETWORK CONNECTIVITY

The *axial concept* NETWORK CONNECTIVITY (A8) was found to have been influenced by the following factors: [F25] **policy influence**, [F26] **industrial input**, [F28] **HEI networks**, and [F40] **public funding strategy**.

The Research Centre Directors develop an extensive network of contacts as they establish the Research Centre and its work within the field. Networks are used to secure both research contracts and representation on national and international research/subject bodies.

> *'We established at a fairly early stage a good working relationship with the Committee for Medical Design and they are still the biggest group of its kind in the world…and we developed some good contacts…with some of the pharmaceutical and medical product manufacturers. The Johnson & Johnson and the Proctor & Gamble and Siemens and Phillips of this world…and that has had a natural momentum of its own. So one project has tended to lead to another.'*
> (CbLEBP, p.29)

Equally, the personal networks of the Research Centre Director and/or Head of Department/School can provide a mechanism to secure suitably qualified researchers ($A_{2,5,4}$,

$B_5$, $C_{10,11}$). For example the Research Director in Case C utilised his research networks to develop new fields of inquiry when other areas of the Centre's expertise began to decline ($C_{28,29}$).

NETWORK CONNECTIVITY is influenced by **public funding strategy** ($F40^{a,b,e}$) and the desire to inform policy ($F25^{a,b,c,d,e}$) as the Research Centres seek to effect both national funding policy (particularly through the RAE panels) and internal policies toward research (such as research committees). Case E illustrates the range of links which enable the Research Unit to maintain an influence across its research interests.

> *'We have got a number of staff on different bodies…I'm one of the associate editors on a leading journal…Jack Rowe who is one of our stars is on a couple of international panels. He is on the RAE panel this time round. I'm also locally on the board of the design lead body…I'm a board member of that, so therefore we have a link straight into the Design bodies anyway whenever we need it. So those are the sorts of links we have.'*
>
> (CeSIMO, p.124)

Furthermore NETWORK CONNECTIVITY is built upon a strong determination to influence University policy toward research. The Research Directors in Case B, C and D have secured prominent positions within research committees to represent their interests and those of the Art and Design departments/faculties. The analysis of Case C, for example (Chapter 7), illustrates the importance of the Research Director's position as Director of Research within the University to enable him to pursue a strategy of creating and supporting Research Centres at Middleton (CcLEFJ, p.14). Furthermore Case A demonstrates the use of internal networks to secure referrals by staff within the University ($A_{23,26,27,28}$).

NETWORK CONNECTIVITY also appears to be influenced by **industrial input** ($F26^{a,b,c}$). The Research Centres with a high degree of interaction with industry through Teaching Company Schemes, European Union projects and new product development services, all take a pro-active role in ensuring they maintain links with local and regional companies.

'Regionalism' appears to have played a significant role due to the influence of regional development and enterprise agencies over regional funding policies. Case A, B and E highlight the region's economic and social status which is of benefit to the Research Centre. The Research Directors develop strategic alliances with the agencies and bodies that have

authority over funding to provide a network of new project opportunities ($A_{31,34}$, $B_{6,26,32}$, $C_{31,33}$).

> *'You keep a track of European Funding Schemes, Research Council Funding Schemes so that we can see the new-thinking procedures that are happening there. It's also a good way of finding out which research themes and ideas are seen to be involved in those kind of circles. It's a good sort of 'acid test'. There are questions of course at times. The relevance factor is of course important. Often you have to consider 'Are we doing something differently? Is our thinking different because we are out of touch or out of tune? Or is it the case we are thinking of that which is further ahead.' That's a useful basis for self-evaluation.'*
> (CbSIBP, p.47)

These links enable them to respond to opportunities by pairing knowledge opportunity (enterprises who seek to gain competitive advantage) with knowledge experts (researchers keen to put theory into practice). The example of Case B is typical of how the Research Centres in Case A, B and C utilise networks to secure their role as 'experts' within the regional economy.

> *'one of the things we did there was to become part of the local consortium in the Banborough region which is funded in part by the European Regional Development Fund and that's a consortium of specialists in CAD CAM in process engineering and methods of manufacture and it has a remit as acting as a broker. Particularly if someone comes along with a bright idea or a company particularly an SME that has an idea for a new product where a company hasn't had a record of branding its own products and developing its own products. We are part of a service which reviews the ideas and then develops them to a point where they can be exploited in the marketplace. So there is a steady stream of business from that and it marries up with our research remit with respect to developing new product rather than incremental development. So there is an opportunity there to cherry pick and choose ideas that we think we would like to do rather than have to do for financial reasons.'*
> (CbLEBP, p.30)

Use of **HEI networks** ($F25^{a,b,c,d,e}$) are also apparent and inform the connection between market opportunity and research expertise. The description of Case A as a *'shop window to the industry'* (CaLEJT, p.49) highlights the opportunity within the internal image of the

Research Centre and a useful means of referral. The ability to recognise internal expertise and market opportunity was also inherent in Case E whereby the Research Director's network of HEI contacts led to the combination of his own skills (as a designer) with those of staff from the engineering department to service a gap in regional product development expertise (CeLEMO, p.11).

### 11.4.6 Comparison with existing literature: NETWORK CONNECTIVITY

DORCISS (1995), Arnold *et al.* (1998), Tornatzky *et al.* (1999) and Whiston (1995) have all noted the influence of networking on Research Centre development. DORCISS identified networking as a means to disseminate and enhance the profile of research outcomes in line with **public funding strategies**; Arnold *et al.* and Tornatzky *et al.* recognise that networking is a negotiated activity which can enable stakeholders to have **policy influence** and therefore inform the strategic and 'near market' direction of the research undertaken; and Whiston found that networking provided a foundation for the contract researcher to progress their career. This study highlights the significance of networks at several levels.

Firstly, as suggested by Whiston (1995), the career development of all the Research Directors' studied have been enhanced through the use of personal and professional networks. In Case A and C, use of **HEI networks** through the Deans/Heads of Department, led to the opportunity to re-locate existing research teams and in Case C and D personal networks provided the Research Directors with support in the form of 'mentors'.

Secondly, the study highlights the importance of the Research Director in establishing effective **industrial input** through networks at regional – business networks and development agencies – and national level through professional associations, trade bodies and the research councils. Importantly, professional networks that had become long standing and personal in nature were often cited as a major means by which research projects were procured. For example the links with the regional European Union funding committee in Case B was put forward as a way of 'cherry picking' new product development opportunities with local companies. Even though these agencies are subject to external scrutiny in the allocation of their funds, all the Research Directors indicated that it was a way of tipping the so called 'level playing field' in their favour – representation on RAE assessment panels was seen as the ultimate 'closure' of professional networking and research standing.

Therefore, this study would suggest that Arnold *et al.* (1998) and Tornatzky *et al.* (1999) are correct to recognise the importance of networks to inform the Centre's work. However, the use of networks to merely inform the Centre's work and strategy does not fully recognise their real value – to monitor and secure new income streams. This study demonstrates that much of the research funding in this sector often appears to be negotiable depending on reputation and appropriate collaborative work with partners[127]. Hence, networks are central to retain **policy influence** for the Research Centre and more importantly, a means by which income streams can be accessed through **public funding strategies**.

Harvey *et al*. (2002) have gone further to suggest that 'network connectedness' is the glue that holds together the factors implicit in a 'successful' research group. Their model of factors which determine the performance of research groups highlight 'network connectedness' as 'the' seminal factor.

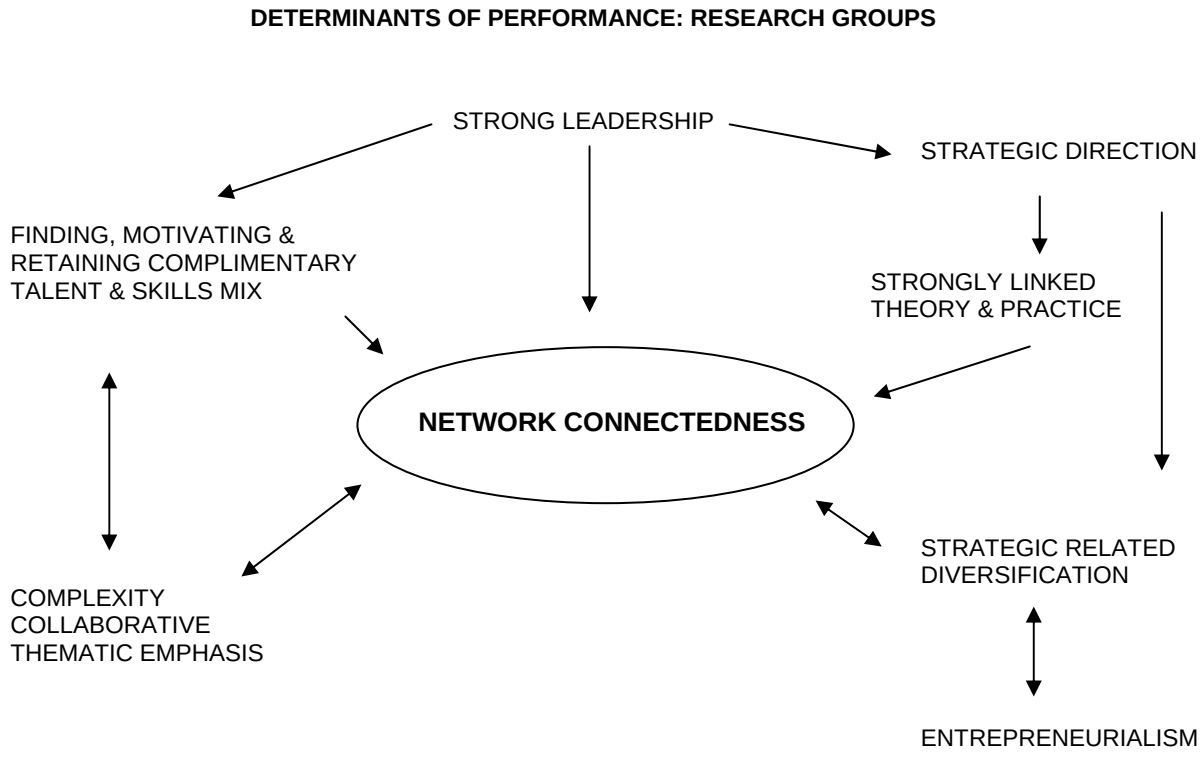



Figure 11.4.6.1 Determinants of performance: Research Groups (Harvey *et al.*, 2002, p.770)

[127] For example the Teaching Company Schemes which require private sector partners (as seen in Case A, B and C in particular).

Yet, Harvey *et al.* (ibid) identify networking through a broader definition than other commentators to cover the ability to access personal and material support. This study would support the work of Harvey *et al.* (ibid) in providing 'network opportunity' to access resources and personal support whether social or intellectual. However, 'network connectedness' as the central concept in research performance has several weaknesses when viewed from the findings of this research.

Firstly, a diverse range of networks which are uncoordinated can lead to the ambiguity of the Research Centres purpose. Case E for example highlights representation on the many regional and international research bodies but a combination of poor communication and lack of trust has resulted in reduced research performance. Secondly, Harvey *et al.* (ibid) indicate a network form of organisation is often more flexible and agile to market opportunity. The Research Centre in Case D, could be regarded as being 'networked' in the research field but its Research Director openly acknowledges that it is not responsive to market opportunity due to regular core funding afforded through the RAE and lastly, networks themselves only provide the opportunity to access support mechanisms. This study would suggest that NETWORK CONNECTIVITY is intrinsically linked to the Research Directors behavioural aptitude for INTRAPRENEURSHIP and ability to conduct sophisticated levels of GAMESMANSHIP (as described above) during Research Centre development.

## 11.5 Frequency count of factors

The table below provides a count of the number of instances a factor was identified as having influenced an *axial concept* and its effect, whether positive or negative (denoted by the + and/or –). Factors are placed in rank order and provide a loose proxy measure of their significance in relation to each *axial concept*. For example the factor **innovator/initiator** [F1] was found to have influenced the *axial concept* INTRAPRENEURSHIP a total of eight times but the factor **outside advice** [F8] only twice. Table 11.5.1 acts as an *aide memoire* to the audit trail utilised throughout this thesis.

It is not the intention here to provide a statistical model from which to predict the potential success of a Research Centre and it is important to stress that complexity is central to this study. Research Centres are highly complex organisations operating in a highly complex environment. They are at the very nexus of the public and private sector divide, maintaining coherent strategies for research, training and consultancy activities for a diverse range of stakeholders. As Harvey *et al*. (2002, p. 766) argue, they are '*multi-faceted…reflecting the fragmented and diverse nature of postmodernity'* .

Therefore, the significance of one factor over another could be considered an arbitrary indication of importance when taken in isolation. For example, the ability of the Research Director in Case C to be a **risk taker** (F4c) during a period of GAMESMANSHIP – as research objectives clashed with the Dean – is only evident in one case. Yet, it has increased significance because it resulted in the Centre achieving Research Institute status.

As recognised by Miles and Huberman (1994), counting in itself can be supportive of qualitative judgements when viewed in relation to a factor's essential qualities and context, without being accused of forcing qualitative data into a 'quantitative mould'.

> *'There are three good reasons to resort to numbers: to see rapidly what you have in a large batch of data; verify a hunch or hypothesis; and to keep yourself analytically honest, protecting against bias.'*
> (Miles and Huberman, 1994, p.253)

| INTRAPRENEURSHIP (A1) | CREDNETIALISATION (A2) | OPPORTUNISM (A3) | FORMALISATION (A4) | CRITICAL MASS (A5) | GAMESMANSHIP (A6) | KNOWLEDGE CAPITALISATION (A7) | NETWORK CONNECTIVITY (A8) |
|---|---|---|---|---|---|---|---|
| F1+++++++/- Innovator/ initiator | F15+++++ Attracting/motivating staff | F36++++++ Ability to publish | F33+++/--- Regulatory controls | F22+++++/-- Resource access | F27+++++/-- Partnerships/ dependency | F30++++/- Image and reputation | F25+++++ Policy influence |
| F2+++++/--- Strategic vision | F17+++++ Educational/ technical background | F34+++++ Demand for expertise | F5++++++ Business plan | F24++++/-- Investment stakeholders | F6++++ Synergy with HEI research policy | F32+++++ Diversification strategies | F28++++++ HEI networks |
| F3++++++/- Desire to succeed | F13++++ Management experience | F39+++/- Industrial development | F7++++/- Time for planning | F14+++/-- Training and development | F23+++ Overhead costs | F12++++ Pricing policy | F26+++++ Industrial input |
| F6+++++/-- Synergy with HEI research policy | F16++++ Industry experience | F40++++ Public funding strategy | F9++++/- Financial systems/ information | F15+++++ Attracting/ motivating staff | F24+++ Investment stakeholders | F29++++ Marketing plan | F40+++ Public funding strategy |
| F4++++/- Risk taker/ uncertainty bearer | F31++ Client handling | F38+++ Societal issues | F11+++++ Project management | F34++++ Demand for expertise | F2-- Strategic vision | F31+++ Client handling | |
| F22++++ Resource access | | F41+++ Location | F18++++/- Quality control procedures | F35--- Competition for staff | F4+ Risk taker/ uncertainty bearer | | |
| F8++ Outside advice | | F37++ Economic conditions | F19+++/-- Information sharing | | | | |
| | | | F20+++++ Communication systems | | | | |
| | | | F13+++ Management experience | | | | |

Table 11.5.1 Factor frequency table

# Chapter 12: Conclusions and policy implications

## 12.1 Introduction

This Chapter will identify the contribution to knowledge made by this thesis. The objectives of the research are revisited and methodological, theoretical and practical issues, including the limitations of the research and policy implications, are put forward in such a way as to aid the usefulness of the thesis to readers. The chapter will be divided into four main sections.

Section 12.2 will review the aims and objectives established in Chapter 1: Purpose of the inquiry.

Section 12.3 will explore the contribution to knowledge and the significance of the *framework* in its empirically verified form. Previous studies will be drawn to the readers' attention in respect of subject context, methodology, and the factors identified, to position this study alongside existing empirical work.

Section 12.4 will examine the policy implications of the research. This will be undertaken relative to two specific audiences. Firstly, University senior managers and research leaders, who through their actions could help or hinder the future development of Research Centres. Secondly, Government and the bodies it has established to control and influence HEIs – the Higher Education Funding Councils and the AHRB. In addition this section will include a critical examination of the effects of New Public Management (NPM)[128] reform and market mechanisms upon Research Centre development.

Lastly section 12.5 identifies the limitations and boundaries of the research and reflects upon the findings of the study and its implications for other domains of knowledge.

[128] A more detailed assessment of the effects of NPM in Higher Education is provided in Chapter 2.

## 12.2 Revisiting the aims and objectives of the study

This study has sought to reveal the complex interaction of factors which influence the growth of Research Centres in University Art and Design departments. Chapter 1 identified three objectives:

(a) to identify factors that contribute to the set-up and development of Research Centres operating within HEIs;
(b) to identify institutional factors which contribute to their success; and
(c) to propose a generic model of Art and Design Research Centre development.

Objective (a) sought to identify factors which influence the development of Research Centres over time from origination to current state. The life-elicitation interviews provided an in-depth account of the development of the Research Centres so that their development could be probed for patterns of cause and effect. The interviews acted as a catalyst for the reflection, recollection and dissemination of the interviewees' stories in a rich narrative form yielding *axial concepts* – encapsulating factors within patterns of causality that have influenced the development of the Research Centres over time.

The *framework* in Figure 11.1.1 presents 39 factors within 8 *axial concepts* to explain Research Centre origination, formation and development – 'intrapreneurship', 'credentialisation', 'opportunism', 'formalisation', 'gamesmanship', 'critical mass', 'knowledge capitalisation' and 'network connectivity'. This process of deriving *axial concepts* as central theoretical concepts within this study, builds upon previous research which utilises techniques to enhance the sense making of 'critical events' reported by respondents and the actions which arise from them[129].

Objective (b) sought to identify institutional factors which influence Research Centre development. The original *framework* put forward in Chapter 2, provided a broad, free flowing and flexible protocol to promote discussion and data collection whilst drawing upon factors evident within the literature. Semi-structured interviews based upon the *framework*, enabled management factors to be explored for practical evidence of their influence, whether positive or negative, upon Research Centre development.

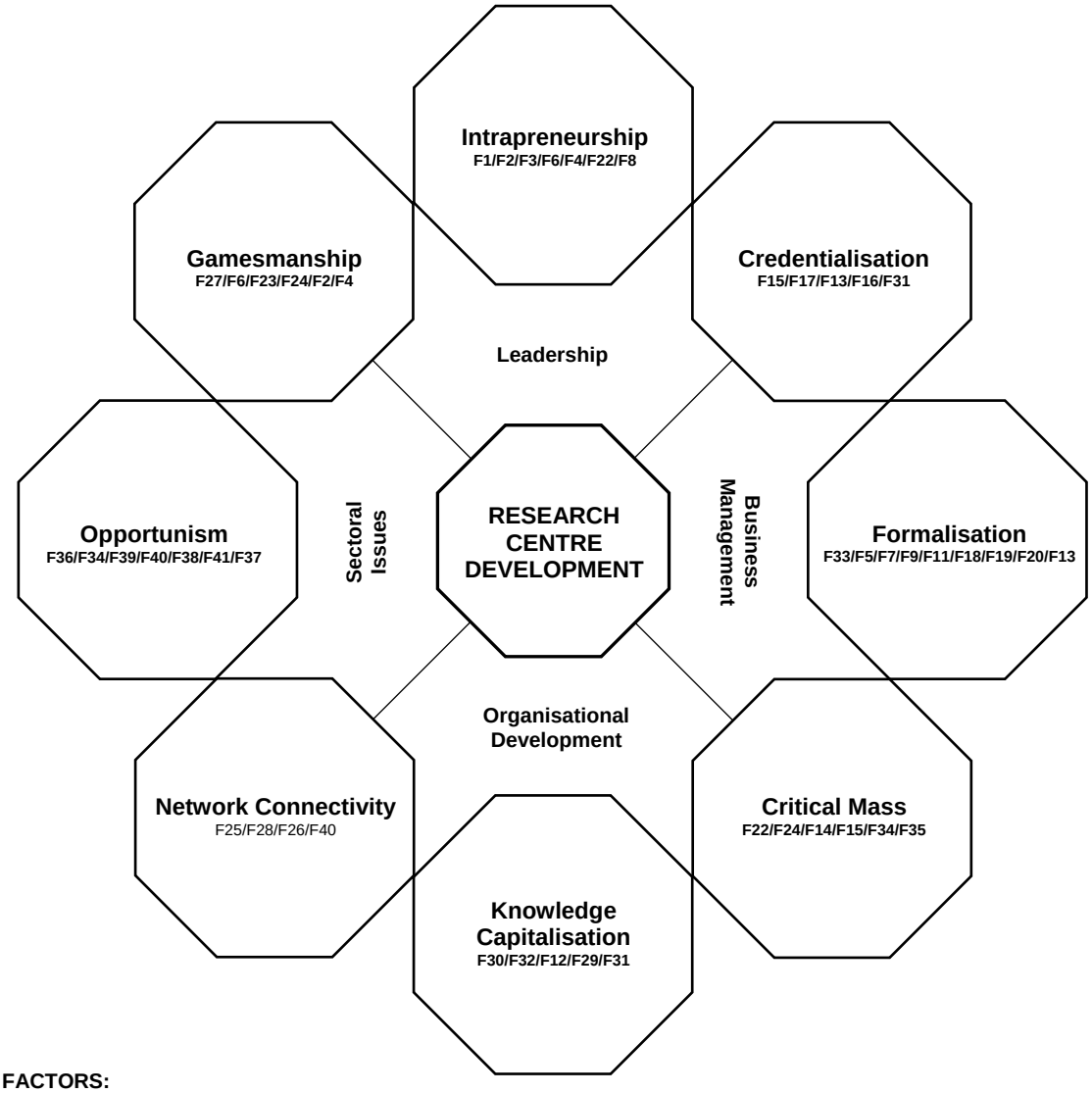
[129] For example Flanagan (1954) and more recently Eden *et al*., (1992), Jenkins and Johnson (1997), and Miles and Huberman (1994)

In practice, two factors within the original *framework* became irrelevant through data collection. The factor **cash flow** [F10] did not translate from the small business text from which it originated (Gibb and Davies 1990). University budget cycles appeared to cushion the effects of ongoing income and expenditure levels (no penalties were imposed) over the financial year and whilst finances were clearly monitored, this factor was adequately reported within **financial systems/information** [F9], and **project management** [F11]. The factor **capitalization** [F21] was also removed from the *framework* due to a lack of evidence for capital investment as described by Gaskill *et al.* (1993). Rather, 'soft resources' were made available. For example the re-deployment of equipment, revised or additional duties/responsibilities of staff and the reallocation of space. Such activities were fully represented through the factors **resource access** [F22] and **investment stakeholder** [F24]. In addition, a further factor became apparent due to the consequences of regionalism and different funding allocations for research, teaching and knowledge transfer activities. The factor **location** [F41] is therefore an additional factor.

Objective (c) proposed that 'a generic model' for Art and Design Research Centre development be explored. The revised *framework* is the empirical foundation for the generic model put forward in Figure 12.2.1 below. The model provides a practical interpretation of the *framework* for research leaders and senior managers to consider the findings in relation to: leadership, the traits or behavioral qualities/attributes of research leaders; business management, the systems and processes that enable effective and efficient management of the Centre; organisational development, the forces that facilitate growth and strengthen the Centre's autonomy; and sectoral issues, the macro-economic dynamics and context for public funding of research.

Here, the order of the *axial concepts* are rearranged as they relate to the four areas of potential influence and the factors which underpin them are placed in the order of frequency within Table 11.5.1. The boundaries of the segments are intentionally blurred between *axial concepts* to highlight the complexity of the factors identified. For example, whilst INTRAPRENEURSHIP has a direct relationship with leadership (both research leaders and senior management), CREDENTIALISATION affects both leadership credibility (through qualifications and standing in the field) as well as management capability (through transferable research and academic management experience) within formalised business management systems.

## Management model for Art and Design Research Centre development




**FACTORS:**

F1 Innovator/initiator
F2 Strategic visionary and planner
F3 Desire to succeed
F4 Risk taker/uncertainty bearer
F5 Business plan
F6 Synergy with HEI research policy
F7 Time for planning
F8 Outside advice
F9 Financial systems/information
F10 Cash flow control*1
F11 Project management
F12 Pricing policy
F13 Management experience
F14 Training and development
F15 Attracting/motivating staff
F16 Industry experience
F17 Educational/technical background
F18 Quality control procedures
F19 Information sharing
F20 Communication systems
F21 Capitalization*2
F22 Resource access
F23 Overhead costs
F24 Investment stakeholders
F25 Policy influence
F26 Industrial input
F27 Partnerships/ dependency
F28 HEI networks
F29 Marketing plan
F30 Image and reputation
F31 Client handling
F32 Diversification strategies
F33 Regulatory controls
F34 Demand for expertise
F35 Competition for staff
F36 Ability to publish
F37 Economic conditions
F38 Societal issues
F39 Industrial development
F40 Public funding strategy
F41 Location*3

*1 and *2 These factors were not evident in the analysis (see Chapter 11).
*3 Location is an additional factor identified in the analysis of factors (see Chapter 11).

Figure 12.2.1 Management model for Art and Design Research Centre development

*Leadership* is influenced by the *axial concepts* INTRAPRENEURSHIP and CREDENTIALISATION. Section 11.2 has shown that the development of *leadership* capacity is fundamental to the development of the research leader during the origination phase. Table 11.2.1.1 has demonstrated that the Dean/Head of Department can establish an 'enterprising' research culture, by supporting individuals to achieve research credentials (through qualifications and publications) and encouragement to progress their careers through research. In addition the Dean/Head of Department can act as a mentor, nurturing intrapreneurial qualities of the research leader through advice and guidance as informal research teams form.

The *axial concept* GAMESMANSHIP (Section 11.4) also affects *leadership* and is recognition that the development of the Research Centre becomes synonymous with the Director's credentials in the research arena, often leading to a shift in authority as the Director seeks further autonomy and control over the research strategy. This area of *leadership* requires research leaders to apply tact (to negotiate further resources for development) and political nous (the ability to maintain senior management commitment as the profile of the Centre grows in accordance with the need to promote itself to external stakeholders).

*Business management* is an area that has increased significance during FORMALISATION as informal practices become standardised in accordance with the requirements of external funding agencies. Section 11.3 has shown that the Research Centre Director needs to differentiate between leadership and management functions to ensure the Research Centre establishes effective processes, procedures and systems to monitor performance. Furthermore, Table 11.3.3.1 indicates that appropriate *business management* strategies for recruitment and training and development can influence the ability to secure and sustain CRITICAL MASS. It also indicates the need for continued resource access and investment from the University as staff numbers grow, demands on administrative tasks such as record keeping multiply, and pressures on the Research Centre Director's time increase.

*Organisational development* is an area that requires close attention if the Research Centre is to pursue growth. Section 11.4 shows the importance of KNOWLEDGE CAPITALISATION as the Research Centres sought to establish an image (independent of the University) and reputation, for the quality of published research output and the effective delivery of research contracts to the satisfaction of funding agencies. Section 11.4.3 shows that the Research Centres had integrated a number of marketing principles to develop new opportunities from within the research process. Such as the recording of case studies to profile the Centres work, drawing to the attention of funding agencies the potential for new research as contracts neared

completion, and ensuring that opportunities to speak at conferences and seminars related the work of the individual to the Centre's knowledge and expertise as a whole.

In addition KNOWLEDGE CAPITALISATION reinforces the 'value' of the Centre's expertise by establishing mechanisms to diversify into new areas of research or product development. For example Section 11.4.3 demonstrates the need to be responsive to the demand for staff knowledge (through the development of postgraduate programmes and Teaching Company Schemes) when there is a clear and tangible (financial) benefit. This signifies the importance of NETWORK CONNECTIVITY and the advantages that can be derived from thinking within a broader delivery framework of contacts at a regional, national and international level.

Lastly, the area of *sectoral issues* might appear to be beyond the control of the Research Centre but it is closely related to the *axial concepts* NETWORK CONNECTIVITY and OPPORTUNISM. For example representation on a research assessment panel was often cited as the ultimate position of influence – achieving increased profile for the Centre and greater recognition of the research output undertaken.

Table 11.2.5.1 demonstrates the importance of OPPORTUNISM as the sector sought to address a gap in research performance leading up to the 1992 and 1996 RAE. But it also points to the significance of external market demand in Research Centre development and the entrepreneurial behaviour of the Research Centre Director to derive competitive advantage from socio-economic, technical and industrial change. Again, section 11.2.5 reinforces the need for Research Centre Directors and their staff to negotiate levels of autonomy and control over their operating environment so that they can respond flexibly to new opportunities.

Ultimately the management model begins where it ends, in recognition of the Research Centre Director's leadership role and the opportunity afforded within a sector gearing itself towards research. Here, the axial concept GAMESMANSHIP balances the Research Centre's value to the department's research performance within the wider HE context against the need to provide continued resource access to maintain its development.

## 12.3 Contribution to knowledge

The literature review highlighted limited empirical work which had relevance to the development of Research Centres[130]. Yet, several studies have direct relevance, namely: *Profiles of Entrepreneurial Research Centres* (Sandberg and Gatewood, 1991); *Training Strategies for Research Centres* (DORCISS, 1995); *Research Performance at the Micro Level: Analysis of Structure and Dynamics of Pharmacological Research Teams* (Bordons *et al.,* 1995); *Strategic Planning in Research and Technology Institutes* (Arnold *et al.*, 1998); *Promoting the Success of US Industry/University Research Centres: The Role of Leadership* (Tornatzky *et al*., 1999); *Determinants of Research Group Performance: Towards Mode 2?* (Harvey *et al*., 2002); and finally the work emanating from the Science Policy Research Unit (SPRU) at the University of Sussex – *Evaluation Criteria of ESRC Research Centres: A Discussion Document* (Whiston, 1990), *Academic Research Performance Indicators: An Assessment of the Possibilities* (Martin and Skea, 1992), and *Contract Researchers and the Social Sciences: An ESRC Review of Research Careers* (Whiston, 1995).

Chapter 11 provided a review of the literature to identify areas of divergence and convergence with the *framework*. The table below provides a summary of the subject context, location, methodology, and the factors identified within these studies[131], leading to a discussion of the contribution to knowledge made through this research.

[130] See for example Sandberg and Gatewood (1991) and Harvey, Pettigrew and Ferlie (2000 and 2002).
[131] Comparison with the *framework* was undertaken initially before additional factors were added. For example the factor 'related diversification', identified by Harvey *et al* (2000 and 2002) was classified under the table heading of **diversification strategies** [F32].

| Author | Roworth-Stokes, 2003 | Whiston, 1990 | Sandberg and Gatewood, 1991 | Martin and Skea, 1992 | Bordons, Zuluetta, Cabrero and Barrigon, 1995 | DORCISS, 1995 | Whiston, 1995 | Arnold, Rush, Bessant and Hobday, 1998 | Tornatzky, Lovelace, Gray, Walters, and Geisler, 1999 | Harvey, Pettigrew and Ferlie, 2002 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Context** | Arts and humanities | Social science | Social science | Science | Pharmacology | Social science | Social science | Science<br>Social science | Science<br>Social science | Medical/ Clinical |
| **Focus of inquiry** | Research Centre development | Research performance indicators | Mapping study – activities and resources | Research performance indicators | Structure and dynamics of research teams | Best practice – research training | Best practice – career development | Framework for RTI assessment | Best practice – leadership | Factors affecting performance |
| **Location** | UK higher education | UK higher education ESRC RCs | United States, Canada, and UK RCs | UK higher education departments | Spanish Universities / public sector | UK higher education RCs | UK higher education RCs | Europe, North America and Asia RTIs | United States of America RCs | UK HE/Hospital research groups |
| **Methodology** | Qualitative – 5 case studies, documentary analysis and 25 interviews | Qualitative – 16 interviews | Quantitative – 29 questionnaires | Qualitative – 117 interviews | Quantitative – bibliometric data | Qualitative – 3 case studies | Qualitative – 100+ interviews | Qualitative – 19 case studies | Qualitative – literature review and observation | Qualitative – survey and 4 case studies |
| **Factors** | ***Leadership*** | | | | | | | | | |
| | Innovator/initiator | | | X | | | | X | X | X |
| | Strategic vision | | | X | | X | | X | X | X |
| | Desire to succeed | | | | | | | | | X |
| | Risk taker / uncertainty bearer | | | | | | | | X | X |
| | ***Business Management*** | | | | | | | | | |
| | Business plan | X | | | | X | | X | X | X |
| | Synergy with HEI research policy | | | | | X | X | | | |
| | Time for planning | X | | X | | X | X | X | X | X |
| | Outside advice | | | | | | | X | | |
| | Financial systems / information | | | | | | | X | | |
| | Project management | | | | X | X | X | X | X | |
| | Pricing policy | | | | | | | | | |

| Roworth-Stokes, 2003 *Continued…* | Whiston, 1990 | Sandberg, *et al.*, 1991 | Martin *et al.*, 1992 | Bordons, *et al.*, 1995 | DORCISS, 1995 | Whiston, 1995 | Arnold, *et al.*, 1998 | Tornatzky *et al.*, 1999 | Harvey, *et al.*, 2002 |
|---|---|---|---|---|---|---|---|---|---|
| Management experience | | | | x | x | x | x | x | x |
| Training and development | x | | | | x | x | x | | x |
| Attracting / motivating staff | | x | x | x | x | x | | x | x |
| Industry experience | | | | | | | x | | |
| Educational / technical background | | | | | x | x | x | x | x |
| Quality control procedures | | | | | x | x | | | |
| Information sharing | x | | | | x | x | x | x | |
| Communication systems | | | | | x | x | x | x | |
| ***Organisational Development*** | | | | | | | | | |
| Resource access | | | | | | x | | x | x |
| Overheads | | | | | | | | | |
| Investment stakeholders | | | | | x | x | x | x | x |
| Policy influence | x | x | | | x | x | x | x | x |
| Industrial input | | | | | | x | x | x | x |
| Partnerships / dependency | x | | | x | x | | x | x | x |
| HEI networks | x | | | x | | | x | | x |
| Marketing plan | x | x | | | x | | x | | x |
| Image and reputation | | x | | | x | | x | | x |
| Client handling | | x | | | x | | x | x | |
| Diversification strategies | x | x | | | x | | x | x | x |
| ***Sectoral Issues*** | | | | | | | | | |
| Regulatory controls | | | | | | | | | |
| Demand for expertise | x | x | | x | | | x | | |
| Competition for staff | | | | | | | | | |
| Ability to publish | x | x | | x | | | | | |
| Economic conditions | | | | | | | x | | |
| Societal issues | | | | | | | | | |
| Industrial development | | | | | | | x | | |
| Public funding strategy | x | x | x | x | | x | x | | |
| Location | | | | x | | | | | |

Table 12.3.1 Comparison with previous studies

Table 12.3.1 demonstrates an eclectic range of research surrounding Research Centre development. These studies focus upon research training, management best practice, career development, performance indicators and determinants of research group performance, but no study has specifically sought to identify factors which affect Research Centre development.

Whiston (1990) was funded by the ESRC to establish evaluation and performance indicators for the ESRC's funded Research Centres. The study detaches the Research Centre from the University's operating environment in order to understand, and measure, direct 'inputs' and 'outputs'. Leadership qualities and sustainable resource access within the University environment are largely ignored. This study is bounded by its purpose, it aids our understanding of specific measures for audit and evaluation of social science Research Centres, but it does shed light upon factors which influence their development.

The Sandberg and Gatewood (1991) study sought to answer 'what' questions, determining ages, affiliations, principal research orientations, and resources. The approach was quantitative, mapping factors such as finance and publication[132], which did not allow any meaningful insight into cause and effect relationships. Sandberg and Gatewood's contribution has been to highlight the growth of Research Centres having a principal research interest in entrepreneurial theory and the influence of Government policy on the nature of their research.

Martin and Skea's (1992) study does not focus on research groups at the micro level and analysis is based within the wider context of departmental research performance. Their work has provided a framework to assess research performance in University science departments and its primary contribution is to identify factors which influence the ability to attract and retain research talent[133].

The specificity of the Bordons *et al.* (1995) study limits the implications of the findings to issues of collaboration and research team size in Spanish pharmacological research teams. Furthermore, the use of bibliographic data to analyse the research 'team' means that the findings have become detached from their operational context[134]. The study provides no insight into research group dynamics other than the frequency of co-authorship and the amount of publications conducted jointly.

[132] Financial figures were gathered from 1973 and publication output recorded from 1981.
[133] Chapter 11 highlighted similarities with Case A – a reduction in team size and reduced interpersonal contact was cited as a reason for a researcher departure.
[134] A 'team' is defined as co-authorship of publication between authors and productivity the frequency of publication by the 'team leader'.

DORCISS (1995) sought to address a pre-determined need to improve and enhance professional development for research staff. In this respect the research was action orientated as opposed to rigorous empirical inquiry. The DORCISS study identifies factors that have implications for the business management and organisational development of Research Centres but the primary contribution is to highlight best practice in research training.

Whiston's (1995) study of contract researchers in ESRC Research Centres is the only research to have recognised that different factors can encourage or hinder research performance at different stages of development. Yet, like DORCISS (1995) the analysis concentrates on the contract researcher and their career development. Furthermore, the ESRC Research Centres studied had a consistent funding period of up to ten years and therefore the dynamics of resource access, market responsiveness, identity, and management systems are significantly different from those studied here[135].

The work of Arnold *et al.* (1998) identified generic management factors which influenced nine high performing RTIs as the basis for the strategic assessment of strengths and weaknesses. The study provides the most consistent alignment of factors with this study – 26 out of the 39 factors identified within the *framework.*

This confirms the assertion in Chapter 2, that the operational context of RTIs is comparable to the Research Centre. However, the RTIs Arnold *et al.* investigated had passed through the early set-up and development phase and factors particularly important in the origination phase have not been explored. Consequently, the study has a bias toward management and organisational issues and was not able to operationalise these factors within a development context.

The Tornatzky *et al.* (1999) study has a high correlation to the *framework* in respect of leadership qualities, business management and organisational development. Yet, there are a number of weaknesses: the factors identified rely on existing literature and deductive logic through personal experience[136]; and definitions of 'US Industry/University Research Centres' are ill defined without consideration of the differences between large industry research

[135] It should be noted that this status would have implications for the order of *axial concepts* proposed in the *framework.* For example a new Research Centre funded through a Research Council would not necessarily have to go through the INTRAPRENEURSHIP phase to achieve CRITICAL MASS. Equally, it could be argued that CREDENTIALISATION would be inherent within the award to establish the Centre.

departments to small University research groups. This study provides a discussion of the potential range of leadership factors in play but the research does not provide a sound empirical foundation to build theory.

Lastly, Harvey *et al*. (2002) have sought to identify determinants of research group performance. This study is by far the most relevant analysis of factors to the *framework* and many of the findings concur with published work from this study (Roworth-Stokes and Perren, 2000a), which identified that entrepreneurial behaviour played a significant part in the career progression of Research Centre Directors.

Yet, Harvey *et al.* are limited to existing data sets compiled as part of an NHS study which appears to have reduced the opportunity to expand on initial findings. For example, the identification of 'network connectiveness' as a key determinant in research group performance does not explain underlying factors, such as personal relationships or mutual career objectives between Research Directors and stakeholders. In addition, operational issues such as management experience and University 'bureaucracy', which might inhibit the 'entrepreneurial' behaviour they associate with success, are not touched upon.

All of the studies above show a lack of work that concentrates on the early phases of Research Centre origination, and indeed formation and development. The literature surrounding Research Centre development is at best incomplete and at worst peripheral. Studies have focused on the specific concerns of research sponsors such as career development (DORCISS, 1995; Whiston, 1995), indicators of research performance (Whiston, 1990; Martin and Skea, 1992), and best practice models have been proposed for leadership (Tornatzky *et al.*, 1999), management (Arnold *et al.*,1998) and research group performance (Harvey *et al.*, 2002).

Table 12.3.1 demonstrates the inability of any previous study to provide a comprehensive assessment of the factors in play and no studies have specifically targeted the arts and humanities. In each case, this study goes further to explain the nature of a factor's influence, whether positive or negative, and the operational context from which it emerged – described through the critical incidents, events and happenings over time.

The completeness of the *framework* to capture the factors identified within previous studies reinforces the process of data collection and the necessity to draw upon a wide range of literatures in the construction of the original framework.

[136] The authors' suggest that their experience of observing the leadership of Research Centres spans

In short, the existing literature surrounding Research Centre development has a number of weaknesses which can be summarised as:

i. a lack of work which aids our understanding of early Research Centre formation and development;
ii. a preoccupation with input and output measures (performance indicators) to measure research performance;
iii. an inability to capture the interaction of factors with critical incidents, happenings and events, during Research Centre development; and
iv. a dearth of empircal work to explain the role of Research Centres in arts and humanities research production.

Consequently, this study can claim to make a valuable contribution to our knowledge of Research Centre development. It addresses a significant gap in the literature and has potential for wider applicability beyond the field of Art and Design research[137].

fifteen years.
[137] The author draws upon the comments of an anonymous referee from the British Academy of Management (Roworth-Stokes, 2000a) who suggested that the findings of the research had wider, cross-disciplinary significance beyond the field of Art and Design.

## 12.4 Implications for policy and practice

### 12.4.1 Career development and promotion

This research supports the view that promotion within Higher Education is greatly enhanced by research performance over teaching (for example, Henkel and Kogan, 1996; Court, 1999; Dearing, 1997). However, the study demonstrates that in practice, the Committee of Vice-Chancellors and Principles guidelines (CVCP, 1993 and 1999) that advise HEIs on the appointment, promotion and reward procedures for staff are perhaps rather idealistic. They suggest that success should be limited solely to achievement and research reputation in the field, whereas this study suggests that if researchers want to progress their careers they will have to demonstrate attributes such as political nous, strategic awareness and micro-political skills. The axial concept GAMESMANSHIP suggests that levels of autonomy and power between the Research Centre Director and senior management change as the Research Director's personal capital grows.

As demonstrated in Figure 11.4.2.1, the Research Centre Director's reputation becomes synonymous with their Research Centre and its standing within the wider research community. Initially, all the Research Centre Directors have a low level of power compared with their organisation upon appointment. As they build an external reputation they rely on some form of support from powerful stakeholders within the organisation. Yet, the power balance changes as the Research Centre Directors achieve CREDENTIALISATION through peer review within the wider research community and whilst their value to the organisation grows so does their ability to move to another University.

Although the Research Centre Director in Case A still has a high reliance on the internal politics of the organisation due to the nature of his promotion (see Chapter 5 for reasons which led to this situation) the founding Directors all demonstrate clear 'entrepreneurial' qualities early on in their careers and take advantage of the organisational need to augment research output. They demonstrate a strategic awareness of the need for external recognition combined with leadership qualities to inspire others to undertake research. They can be considered as *intrapreneurs* due to their ability to utilise their organisation's resources and act as key agents of change (Palfreyman and Warner, 1996).

In comparison with Schein's (1990) career anchors, the Research Centre Director requires an operating environment that supports 'entrepreneurial' and 'autonomy' characteristics.

However, the situation is more complex in that Research Centre Directors move toward the 'security/stability' career anchor during periods of stability and Arnold *et al.* (1998) would suggest that this is not indicative of a permanent shift in career anchors, but a temporary state. It seems likely then, that the career orientation retains a combination of 'entrepreneurial' and 'autonomy' career anchors at heart. This research demonstrates that careers are not specifically linked to progression through a prescribed organisational hierarchy and the Research Centre Directors studied, did in effect, create their own career trajectory.

Therefore, the career development and promotion of these intrapreneurial individuals may require increasingly flexible forms of Human Resource strategies which provide greater discretion toward conditions of employment as opposed to any perceived 'norms' of functional differentiation. In practice, sector guidelines on the appointment and promotion of research staff in HE (CVCP, 1993, 2000) are unrealistic – an aptitude for political 'gamesmanship', strategic awareness and tact in marrying personal and organisational agendas (micro-political skills) emerge as necessary qualities for career progression.

### 12.4.2 Higher Education management

McKenna (1996) suggested that the former Polytechnics would have to focus resources and concentrate activity in a few specific disciplines to challenge the 'hegemony' enjoyed by the former Universities. This research confirms the view that Art and Design has become 'one' of those disciplines within the former Polytechnics able to achieve 'centres of research excellence' status. However, the funding handicap facing the new Universities – exacerbated by the growth in student numbers – will continue to put pressure on the resources available to pursue the research agenda and the need for an increasingly focused and targeted approach. Whilst there is the need to target resources to potentially high performing groups there is a danger that designated research staff may become alienated with a subsequent loss in innovative curricula within the department – apparent in Case C.

The research highlights that research performance requires the willingness, engagement and motivation of staff, and in particular the nurturing of key intrapreneurial change agents – for example in Case B and D. Nevertheless, the tensions that arose in Cases A, C and E may also indicate an obvious but little understood consequence of the remit of senior management roles (Deans, Heads of Schools/Departments) which originated from the former Polytechnics. They were and largely still are, responsible for financial planning, management of teaching staff, quality assurance oversight of programmes and were appointed without prior

experience of research or research management. Therefore, whilst one could not argue that senior management have a responsibility to determine priorities within the department, one might question their credentials to determine research investment strategies without wider consultation from within the research community.

The research has demonstrated that the hierarchical role of the Dean can come into conflict with the desire of the Research Director for greater autonomy and control over research strategy, as the Research Centre seeks to maintain growth through increased resource access. Here a balance must be struck to retain the Dean's 'hierarchical' (Katzenbach and Smith, 1993) sense of ownership for the research undertaken in the department and for the Research Director to retain authority as 'team leader' whilst his/her personal capital grows. Furthermore, this level of autonomy must be managed as changes in work patterns became an inevitable consequence of more flexible structures employed to pursue the research agenda. The research clearly points toward research staff conceptualising their careers beyond the boundaries of the organisation toward the research field. They place the highest value on the esteem of their peers and in Case A and C for example, research staff align their career progression not with the University but with the profile and standing of the Research Centre Director.

The research also concurs with the findings of Whiston (1995) which suggests that Research Centres seek to implement management procedures and information systems in order that they can represent themselves directly in response to stakeholders demands. Equally, the establishment of parallel systems to those of central administrative departments (e.g. marketing, promotion and financial recording) are an essential means of the research team creating a common sense of purpose, social cohesion and social representation (Katzenbach and Smith, 1993). Therefore, University policies covering external relations will need to recognise that Research Centres need to be able to develop their own unique identities and global polices of corporate unity will need to be adapted locally.

### 12.4.3 New Public Management

This research has highlighted the central concept of INTRAPRENEURISHIP in the development of the Research Centre. The Research Director's role necessitates the demonstrable aptitude for entrepreneurial qualities but they are constrained by the post-bureaucratic context (Henkel, 1997) in which they work. Therefore, Research Directors could be considered as 'intrapreneurs' (Perlman *et al*., 1988) due to the necessary skills of tact,

judgement, and political nous in the negotiation and re-deployment of University resources. In the same way the owner-manager is central to the development of small and micro-enterprises the Research Centre Director is crucial to the development of the Research Centre.

Yet, the findings of the research contrast sharply with current notions of civic and education entrepreneurs (e.g. Etzkowitz, 1983; Boyett and Finlay, 1994; Leadbeater and Goss, 1999) which are based upon the presupposition that entrepreneurial behaviour is readily transferred to Higher Education. The Research Directors evolve and develop the propensity for intrapreneurial behaviour and operate with increasing levels of autonomy and authority as their personal research standing grows. Hence, the intrapreneurial behaviour of research leaders can be incrementalist whereby entrepreneurial traits such as **risk taker/uncertainty bearer**, **innovator/initiator**, and **strategic vision**, can be developed and nurtured. Indeed, the analysis of INTRAPRENEURSHIP demonstrates the role of the Dean as mentor and 'champion' for the newly credentialised researcher as they take on additional leadership responsibilities in the pursuit of enhanced research performance.

The role of the Dean as senior management 'champion' is therefore critical to relieve or re-negotiate bureaucratic processes and procedures. At best the Dean is able to nurture and support the autonomy and authority required by the intrapreneurial research leader, at worst they seek to protect their hierarchical status, and hide behind bureaucracy to maintain power differentials. This research suggests that senior management in HEIs may need to discard perceived 'norms' of functional differentiation over levels of power and autonomy as the Research Director's personal capital grows or risk losing ground in research standing.

Much has also been made within the New Public Management text of the 'entrepreneurial University' (e.g. Clark, 1998; Shattock, 1983) due to a move toward increased market focus and reduced reliance upon central, HEFCE, funding[138]. This research would concur with Clark and Shattock that Universities are indeed demonstrating a desire to respond to their regional and local 'markets' through their mission statements (see Chapter 4). But the concept of the University as a 'corporate enterprise' as described by Henkel (1997), was far from the reality in practice. The majority of the Research Centres studied evolved from informal staff initiatives to consolidate research activity, yet their entrepreneurial qualities (seeking to be responsive to new market opportunities) appear to have been constrained by bureaucracy,

[138] For example Warwick University and University of Salford have both declared a distinct 'near market' focus through the mission and policy statements to HEFCE often cited as a trend toward entrepreneurial universities.

particularly hierarchical management styles, inflexible financial procedures/systems, rigid personnel management procedures and complex regulatory frameworks.

Budding research leaders have to negotiate resource access, develop parallel management systems, build research teams with their own identity and social cohesion, and act as key agents of change (Palfreyman and Warner, 1996). They respond to a gap in organisational performance (Kirzner, 1973) whilst recognising their dependence upon the University environment and significant pre-bureaucratic (Henkel, 1997) barriers that lie beyond their control.

This study would concur with Henkel's suggestion that New Public Management in Higher Education is still full of ambiguities between bureaucratic and post-bureaucratic forms of management. Senior management strategies designed to manage uncertainty and responsiveness to market need often lead to resistance and inflexibility at an operational level due to an inherent inflexibility within a 'quasi-market' (Boyett and Finlay, 1994).

Here, the same problems associated with less successful Research Technology Institutes (Arnold *et al.*, 1998) appear to be evident in the periods of conflict that arose during the development of the Research Centres – an overriding quasi-academic style of thinking ultimately compromising the entrepreneurial qualities of the Research Director. The role of the Deans/Heads of Department as senior management 'champion' is therefore critical to relieve or re-negotiate over bureaucratic processes and procedures.

Even so, one could argue from the macro-perspective that Research Directors and their Deans are mere puppets in the hegemony of government control and the formation and development of the Research Centres studied is just the result of a change in public funding strategy. However, this would negate the complex range of factors which have influenced the Research Directors to act as key agents for change, and in particular, the opportunity for a high locus of control over their careers. Both the Research Directors and the Deans used the opportunity afforded by a gap in research performance to balance personal and organisational objectives. Deans were able to pursue higher positions in the reflected glory afforded through research success in the RAE. In contrast with a lack of autonomy within teaching posts, the Research Centre Directors took control of their careers in the pursuit of enhanced status in the field and high personal capital within the sector.

### 12.4.4 Art and Design research funding

There has been much acrimonious debate about the effects of research selectivity through the RAE (e.g. Elton, 2000; Bainbridge, 1998; Kogan, 1998; McKenna, 1996) which has centred around the disparity of research funding between pre and former-1992 Universities and the promotion of research over teaching. However, the vocational nature of Art and Design as a discipline has meant that the RAE has become a powerful new market opportunity for the former Polytechnics in a field they have been able to exploit. In the 1992 RAE, Art and Design became eligible for research funding under its own categorisation and for the Art and Design departments in this study, often seen as expensive due to their specialist nature, this offered an opportunity to diversify and increase funding (Allison, 1994).

In addition, research selectivity – individual research performance as the basis of assessment – has suited the nature of employment for many of the Art and Design departments. Traditionally they have been able to utilise a higher percentage of part-time academics to provide a larger 'pool' of eligible 'research active' staff. Inevitable, the nature of research selectivity and the distribution of research funds is contentious, however, its ability to enhance personal equity in a tangible and transparent way has clearly benefited the Research Centre Directors in this study.

Paradoxically, the emphasis on individual assessment of research quality appears to have discriminated against cross-disciplinary and inter-disciplinary research. For example in Case E, the inability to submit collaborative work (between design and engineering departments) was reported as a contributory factor to a change of direction to support solely Art and Design research projects.

Furthermore, there would appear to be a difficulty of representation and quantification of research output that does not affect the arts disciplines. Whilst the production of an artefact or piece of artwork will normally be exhibited and catalogued, the opportunity to quantify the design of a new product for industry and/or the development of a new system or process appears difficult to quantify in RAE terms. Whereas exhibition catalogues and the standing of the exhibition venue can be readily identifiable by the assessment panels, the equivalent outcome in the design fields often necessitates the production of a journal article or paper to reflect upon the contribution made due to the contraints of production and commercial sensitivity.

Research selectivity places a greater burden upon the commercial subject areas to quantify research output even though they are often more able to demonstrate a direct contribution to the local and regional economy. The illustration below highlights the tension of trying to balance commercially led projects with industry whilst seeking to appease the non-vocational culture of the University research community and its desire to achieve enhanced performance in the RAE.

> *'the [research] activity of the Centre is so alien to the University environment…The University environment measures everything you have done by the amount of research papers you have written and the number of people in your supervision and certain other criteria. Yet here the dissemination is through training courses, products and seminars which are completely different criteria. So much of the activity in here goes unrecognised by the normal path of recognition.'*
> (CaLEJT, p.75)

Much depends upon the internal research structures and policies to determine a fair and equitable distribution to Research Centres in order that they can develop. Unfortunately, there is no simple solution to methods of research fund allocation that can be identified in this research – the 'Collegial' model (see section 10.2.2) tends to have control over the majority of the RAE funding due to the role and remit to facilitate research within the department; and the 'Consultancy' model requires a high allocation of operational costs outside of income from the RAE with additional support services provided through a departmental research office. Hence, senior management in Art and Design departments must take account of their own specific circumstances before determining research investment policies.

The establishment of the AHRB in October 1998 has provided a further support mechanism for Art and Design research through various initiatives[139] including the Research Centre Award scheme – up to £500K over five years. Yet such large scale funding for new Research Centres may in practice stifle the intrapreneurial behaviour so evident throughout this research. Indeed, the desire of the AHRB to establish a small number of centrally funded Research Centres, in a similar vein to the EPSRC and ESRC sponsored Research Centres, might say more about the new Board's insecurity than the need for an initiative of this type.

The tendency to rely on central funding and the layers of bureaucracy established through the funding criteria, may induce a lack of responsiveness to market demand and as a consequence

reduce the potential for knowledge transfer – an area in which many of the Research Centres studied have become so adept. Indeed, Whiston (1990 and 1995) highlighted a potential weakness in the ESRC Research Centres due to the lack of efficiency in the research process during the 'in-decline' stage as it became apparent that the only sustainability strategy for this type of Research Centre was an exit strategy.

Arnold *et al*. (1998) also warn against a dependence upon large scale central funding in Research Technology Institutes due to its association with poor performance characterised by a *'quasi-academic style of management thinking'* and *'loosely-associated technological fiefdoms rather than as a unified organization'* (Arnold *et al.*, 1998, p.96.).

The AHRB may well be better advised to distribute the Research Centre funding awards through smaller project initiatives that facilitate the development of emergent research groups or support existing Research Centres to develop new fields of investigation – the new Innovation awards (of up to £50,000 to fund innovative research projects) is a useful starting point.

At the time of writing the funding bodies were considering the recommendations of the review of Higher Education research assessment by Sir Gareth Roberts (2003). The review recommends wide ranging change to the future of research assessment with the abolition of grades in favour of a quality profile based around a three-track submission system. An expert peer review process would only be retained to identify the best research through a Research Quality Assessment (RQA) process. Alternatively institutions could submit research through a research capacity assessment using strategy and metrics-based analysis. For institutions with the least research the form of assessment would be a matter for the funding bodies.

This development has the potential to reduce the amount of gamesmanship evident in earlier RAEs but it could also have significant ramifications for the Research Centres studied depending upon the strategies adopted by their HEI. Viewed alongside the Government's White Paper on the future of Higher Education (DfES, 2003) there is an emphasis on the 'less research intensive' institutions engaging in knowledge transfer activities (through regionally based Knowledge Exchanges) and the 'research intensive' institutions concentrating on research of international significance.

[139] Such as the AHRB Research Centres, the Resource Enhancement Scheme, the Innovation Awards and Small Grants.

Depending upon the balance of research consultancy, training and published research output, Research Centres may become dislocated within their own HEIs research strategy. They may be forced to revise their objectives, change their structure, or even become party to a new, more select, market for research talent. Whatever the outcome of the review the consequences for the sector in the run up to the next research assessment will be profound.

## 12.5 Suggestions for further research and final conclusions

### 12.5.1 Successful and unsuccessful Research Centres

At the point of registration it was envisaged that the investigation would focus on theoretical sampling of bi-polar, paired, case studies[140] of Research Centres drawn from the Art and Design sector. As with Freeman (1982) the approach would have compared similarities and commonalities of the success and failure halves of each pair from which patterns of divergence could be established. In reality, this approach proved unworkable. To compare private sector product innovation teams with senior academics developing University research interests in a public sector organisation was never going to be completely congruous. Product innovation 'teams' more often than not work on several concepts at any one time and if one fails due to market pressures then there are plenty more products to develop. Such a reflection on success and failure does not always lead to a direct personal association due to the volume of projects being undertaken within the organisation. Research Centres, on the other hand, are led by senior academics, who are intrinsically wedded to the research area being pursued. This individual focus is amplified through research selectivity, whereby professional and personal status become intertwined in the quality of research work being undertaken through the Research Centre.

In practice, senior researchers do not want to talk to anyone about something that might be considered 'unsuccessful' when it might have such profound professional connotations. Furthermore, the host University being largely risk averse, will seek to establish 'virtual' research groups that may flourish or die naturally before being flagged to the outside world as national or international 'centres' of research activity. Hence the mere fact that the research activity had been bestowed 'Centre' status by the University means that it has become successful through national or international standing.

However, the research design has focused upon Research Centres at the upper end of performance through departmental RAE submissions and therefore, the research cannot determine factors which may be attributable to successful, as opposed to unsuccessful, Research Centres alone. Whilst it is difficult to envisage a situation whereby research staff would agree to talk openly about unsuccessful research performance without excessive

[140] Freeman, C. (1982) used the systematic comparison of 'pairs' in his study for SPRU (Science Policy research Unit) of the success and failure of industrial innovation to focus on both the common

coercement – perhaps through funding agency pressure – the opportunity to determine factors solely attributable to successful Research Centres still remains.

### 12.5.2 Measuring Research Centre performance

In addition, this research can always be criticised on the grounds that measures of Research Centre performance are indeed, arbitrary, due to the peer review process of departmental assessment of research quality through the RAE. Whilst many authors have tried to establish more finely tuned means of evaluation of departmental research output (such as Whiston, 1990; Martin, *et al.*, 1992), there still remains much debate and argument ever since the issue was drawn into view through the surveys of academics conducted by Professor A. H. Halsey in 1964 and 1976, which sought to identify the location of the best UK departments in the respondent's discipline (Karabel and Halsey, 1977; Kogan, 1998).

Therefore, this research has sought to employ multiple methods of evaluation to seek to identify, as far as is reasonably practical, Research Centres operating at the upper end of the research performance spectrum. The combination of evidence (with detailed criteria and filtration process established in Chapter 3) is clear and unequivocal and provides an adequate measure of Research Centre performance both in terms of quality and longevity for the study.

### 12.5.3 Transferability of findings to non-Art and Design Research Centres

Yin (1993) suggests that there is a need to specify the nature, range, scope and boundaries of the research arena under investigation in order that the researcher does not become overwhelmed by the sheer volume of data. Eisenhardt (1989) also emphasises the dilemma of depth and breadth in multiple case study research and the practical resource constraints of the researcher – too few cases (Eisenhardt suggests less than 4 cases) and the data becomes indecipherable from the context in which it is derived, too many cases (Eisenhardt suggests more than 10 cases) and the data loses its richness and ability to yield rich insights into why patterns of phenomena occur. The boundaries placed upon this study, Research Centres operating in United Kingdom University Art and Design departments, have yielded 5 cases which have formed the basis of the data analysis, conclusion forming and theory building. Whilst the Art and Design area has provided an ideal field of enquiry to shed light upon

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characteristics of success and failure but more importantly the divergent patterns within the fifty eight

Research Centre development – building upon the researcher's knowledge in the area[141] and because it is a fairly new field that provides opportunities for the full range and interaction of factors to be analysed[142] – the specificity of the subject field raises questions of transferability to non-art and design Research Centres. Indeed, the Art and Design sector has a number of characteristics which are not apparent in other sectors or disciplines.

The stimulus of the 1992 RAE meant that Art and Design departments within HEIs began to strategically gear themselves to research. This effect of increased research investment and enhanced credibility of the subject discipline has often been referred to as the 'Cinderella' effect (Frayling 1993). In comparison with more recognised research disciplines where Research Centres have been established much longer, the urgent need to invest in research and consolidate resources may not have become so apparent. In disciplines such as the social sciences, research has tended to focus more on the efficiency and revitalisation of long-standing Research Centres that have begun to decline (DORCISS, 1995). Art and Design Research Centres are operating in an emergent field and as such have not yet encountered the need to reinvent themselves in response to new markets.

Hence, an opportunity exists to conduct research of a similar nature within other areas. Indeed, there is the potential – with more resources than were available here – to undertake a much larger cross-disciplinary study of Research Centre development. Whilst the envisaged study would have to resolve issues of differing timeframes of formation and evolution, it would shed light onto the commonalties and differences of factors influencing Research Centre development across Higher Education disciplines.

### 12.5.4 Departmental research performance

This research has focused upon the development of Research Centres as a means of enhancing University research performance but it has not sought to examine departmental research performance as a whole. Whilst many of the Research Centres were intrinsic to the culture of the department research – Case B, D and E operated as the central means of co-ordination, monitoring, research degree supervision and staff development in their respective departments – the research does not explain whether high performing Research Centres

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innovations under investigation.

[141] As discussed in Chapter 1.

[142] Due to the 1992 eligibility of Art and Design research in the RAE through its own Unit of assessment.

operate in high performing departments or indeed, whether high performing research departments support the formation of high performing Research Centres.

Whilst commentators have pointed to the way Art and Design as a discipline has sought to concentrate and target resources in order to attain research excellence (McKenna, 1996), a question still remains: are Research Centres an effective method of enhancing departmental research performance? Although this question may prove difficult to answer in practice – due to the divergence of organisational structures between Universities – it would shed light on the significant issue of whether the research capability evident in the cases, could be equally replicated through other means.

Therefore, there still remains an opportunity to investigate factors which influence the high/low research performance of departments across Higher Education. Such a study might utilise the tools employed within this research but with a larger sample frame of respondents drawn from teaching roles and administrative support functions. Freeman's (1982) approach to the sampling of case pairs could be utilised to contrast high/low performance in each specific specialist area to compare similarities and commonalities of the high/low cases from which patterns of divergence could be established. However, such a study would have to overcome the reluctance of senior academics who might not want to be associated with poor performing research departments.

### 12.5.5 Final thoughts

Methodologically, this study has adhered closely to Eisenhardt's (1989) model of theory building from case study research. A huge amount of data has been accumulated – over 150 thousand words elicited within interview transcripts and many hundreds of contextual documents – yet, the *framework* has maintained a clarity of purpose within the data analysis and a consistent data trail has ensured transparency throughout the process of condensation.

Importantly, the *framework* has remained fluid without restricting new factors and patterns of phenomena to emerge. Rich autobiographical accounts shed light upon critical events during Research Centre development and semi-structured interviews provided a transferable protocol to determine the influence of management procedures, processes and systems in play. The eight *axial concepts* make sense of their combined influence and the complex interaction of factors during Research Centre development.

The study has also straddled an epistomological tightrope, through the interplay of etic factors, proposed within the semi-structured interviews, and emic phenomena, native patterns of critical events, incidents and happenings in the respondents' own accounts. The findings allow for a deep understanding of factors which influence Research Centre development in a useful and pragmatic manner. As Miles and Huberman (1994) argue, methods which produce clear, verifiable and credible meanings from qualitative data are *'grist for our mill'* (p.3).

This study is a practical example of what Miles and Huberman (ibid) term 'transcendental realism'. The aim has been to describe events in the context from which they emerged and to identify the core social processes which underlie them. Subjective accounts have been triangulated to derive a degree of objectivity and causal explanations have been proposed with evidence to support each event as an incidence of that explanation.

The analysis identifies 39 factors within 8 theoretical concepts to explain Research Centre development. The findings suggest that research leaders have to demonstrate many intrapreneurial qualities for Research Centres to succeed – strong leadership and strategic awareness; the negotiation and procurement of resources; and an aptitude for micro-political skills.

One can speculate that these findings have relevance to other domains of research beyond Art and Design, such as medical, science and social science related fields. Medical and clinical related research has a number of similarities in respect of the theory practice interface between Universities and the National Health Service (Harvey *et al.*, 2002). This is akin to the design orientated Research Centres whereby knowledge is transferred through new product development procedures into manufacturing industry.

Likewise, Whiston (1990) found similarities between science Research Centres and small enterprises, as they sought to develop an independent identity to the University (through separate management systems and image). Both medical and science related Research Centres bear close resemblance in organisational structure and management to the 'Consultancy' model identified in this study – the knowledge of the multidisciplinary team being promoted as a key 'market' asset.

Social science Research Centres also appear to display similar characteristics. Sandberg and Gatewood's (1991) study of entrepreneuship Research Centres, located in business schools, show a constituency link with industry through applied research. The predominance of

applied research over theory-orientated research was related to higher overall budget potential.

Therefore, the *axial concepts* relating to business management and organisational development – FORMALISATION, CRITICAL MASS, KNOWLEDGE CAPITALISATION and NETWORK CONNECTIVITY are likely to have equal importance to Research Centres in these fields. The central concept of INTRAPRENEURSHIP, the ability to demonstrate entrepreneurial qualities and strong leadership, is also likely to be just as significant as Research Centres become synonymous with their Research Director.

However, the temporality of Research Centre development in an emergent field would suggest the nature of the phenomena observed through the *axial concepts*, might be different in more established domains of knowledge. For example, Whiston (1995) has pointed to the difficulty of research staff achieving secure employment compared to academic posts in the social sciences. If anything, this research indicates that academic Art and Design staff have been encouraged to seek, and have achieved, career progression through Research Centre development[143].

The importance of CREDENTIALISATION, the association of research degree qualifications and credibility of the research leader in the formation of the research team, and OPPORTUNISM, career progression through research over teaching, may well attain a different order of cause and effect relationship – formalisation and development issues as opposed to those surrounding origination. Undoubtedly, when viewed from the macro perspective, the research leaders in this study have been afforded a unique set of circumstances to control their working environment and enhance their personal standing; an historical situation as the sector systematically geared itself toward research alongside teaching.

It is also important to note that the nature of research production in Art and Design is not entirely homogeneous. The cohesive picture of individually focused arts and humanities research presented by Hemlin and Gustaffson (1996) might be true for research in the visual arts but this research highlights the heterogeneity of Art and Design research as a whole.

These differences also indicate different resource requirements – computer aided design and manufacture facilities, and digital and media technology in the design orientated disciplines –

studio space, media and exhibition venues within the arts. Both have practice-based elements within them but the outcomes are essentially different: a new invention, product or system; or a painting, artefact or collection. One contributes directly to the economy through business and industry, and the other, to the cultural wealth of society as a whole.

Design orientated Research Centres have to aquire external income to match University investment in research infrastructure (to support teams, groups and Research Centres based around specific, transferable knowledge). The arts research disciplines require less infrastructure to research through practice which is often conducted in an independent, nomadic way, except to collaborate with other practitioners through joint exhibitions. The dual funding mechanism – quality research related funding assessed through the RAE and competitive Research Council project awards – so apparent in the sciences (Hemlin and Gustaffson, 1996), is replicated in both areas, but it is essential to research group formation in the design subject areas.

The recent reviews undertaken to consider the future of research infrastructure in the arts and humanities (HEfCE, 2002; AHRB, 2002) have commenced the process of identifying remedial funding – only 15% of quality-related research funding and 3% of Research Council grants support arts and humanities subjects (AHRB, 2002).

In a House of Commons Science and Technology Committee on the Research Assessment Exercise, Margaret Hodge, former Minister for Lifelong Learning and Higher Education reported:

> *'across all sciences the increase in research between 1995-96, 1999-2000 was 27.5 per cent. The increase in research income across all the arts in that period was 28.1 per cent…the increase in pure arts funding was 128.9 per cent – a very low base, they only started with less than £17 million.'*
> (House of Commons Science and Technology Committee, 2002, p.53)

In response the Chairman responded tersely: *'They only need a pen and pencil really!'*

[143] Except Case A which appears to have had limited career development opportunities as internal, competing Research Centres formed.

Now that the AHRB is to become a Research Council (ibid) with the Office of Science and Technology as sponsor, it should be in a much stronger position to address the lack of 'dual' resources for Art and Design. Particularly those that support the design subject disciplines. It might also take note of the many ways in which Art and Design Research Centres have facilitated and promoted the Governments '3rd stream funding' policies[144] within the creative industries[145]. The traditional prejudices surrounding a lack of credibility in the practice-based disciplines – evident above – should be put to one side through the realisation that Art and Design Research Centres can act as a major gateway to Higher Education knowledge for industry and the wider community.

[144] Such as HEFCE's Higher Education Reach-Out to Business and the Community Fund (HEROBC), Higher Education Innovations Fund (HEIF) which are a direct response to the Government agenda to promote stronger working links – through knowledge transfer - between industry and Higher Education.

[145] Defined by the Department of Media, Sport and Culture as industries which depend upon the creation of original intellectual property by individuals or teams for their added value, which have creativity at their heart and which have the potential for wealth and job creation (DCMS, 1998 and 2001). The DCMS value this sector of the economy at £112 billion.

# Appendix A: Example ‘life-elicitation’ interview - Research Director, Case D



**DOCUMENT TEXT REPORT**

**Created:** 18/04/2000 - 12:49:29
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**1:** **CaseDLEPW**
**2:** **Research Director Interview with: Dr Paul Wyatt**
**3:** **Date: 26.3.98**
**4:** **Held at: The Art & Design Research Centre**
**5:** **University/College: Bainbridge University**
**6:**
**7:** ***INTRODUCTION [Q. The interview has been arranged to begin to establish the background, context and development of the (Research Centre). As Research Centre Director you are in a unique position in respect of being able to describe the creation, evolution and development of the Centre. I would like to go back to your first recollections of how the Centre was conceived and from this point trace through the decisions, milestone and factors, including where possible the achievements, failures, feelings and emotions, that have led to the establishment of the Centre as we see it today.]***
**8:**
**9:** 'OK. Well I think we have got to go back ten years and so in 1988 we first took on a Research Student and that really came about for a number of reasons. One reason was that the University wanted to prime research in all areas of activity and so some money was available internally, just a little studentship, nothing fantastic, but that kind of coincided with myself and slightly earlier another colleague completing Ph.D work. So we we're in a position for the first time to actually supervise mostly from within the discipline but not entirely and we still needed some assistance and expertise and experience from colleagues in other parts of the University but you know we had a kernel there of enthusiasm and possibility. We couldn't have started off in any more difficult way and I say that because the Research Student that we identified was/is a Fine Artist, a Sculptor, and from his post-graduate work had identified a particular problem, issue or challenge that he wanted to try and explore through more research and of course, you know, we started off from a position of having no sort of set methodology. A major problem - apart from the Supervisors' various experiences, me and my Ph.D research being in education. So I mean I came with a sort of social science set of skill although I have always been a practicing artist and still am. My colleagues skills were in critical and contextual studies and environmental design and environmental biology, if you like.
**10:**
**11:** So, we kind of had different sets of skills and of course the student had his own methodology from his practice that he wanted to develop and see where that could be helpful in terms of research methods. So it was incredibly difficult to get going. You know, our University operates a system where you've got to go through quite a rigorous procedure for registration. I'm sure that's the same in most places. It took us months and months and months and months to actually clarify what it was, how we were going to do it and convince people that this was a viable thing to do. So we might have started off in a much easier way by having a Design Research Student where there is some methodology in research already established but any rate we jumped in a see where you get to and hope you don't drown So after that initial struggle it took a couple of years but in that time we brought on another couple of research students so we had a little sort of growing core and we were still getting all sorts of problems from the University in terms of what are these guys doing. They've got no credibility and right enough we were starting off from scratch. So you've got to start somewhere and you've got to put a marker down

somewhere and eventually we did gain credibility and they could see that what we were doing was viable and realistic and methodologically sound and it looked like interesting research.

**12:**

**13:** So, we started off with research students. Again, because of naivety, we thought we would apply to the EPSRC for research studentships which was kind of looked on as completely crazy because you know, that's not for artists and designers. But we thought that the projects we had in mind in had a technological bias and it actually worked.

**14:**

**15:** Between 1989 and 1994 we had five EPSRC studentships which was sort of unheard of in Art and Design. People kept saying "how have you got this?" and it was really a case of 'having a go' and I think that is a principle that we have always had. Well why not, have a go, you know, as long as it does pay off to a certain extent in the end. That was incredibly useful because, if you're involved with a Research Council then they're pretty tight on what you're doing and how you're doing it and what are the outcomes and you know, we were very aware that the kind of national statistics for completed research wasn't very good, 40% or something like that. So we were really under the microscope about completions and we have managed to complete all but one of those, there is one waiting to complete, so that was very important, trying to get external funding and just trying to just see where you could get funding for studentships.

**16:**

**17:** So, by that time we had built up a little bit of expertise, we'd had two completed PhDs but the students at this time, up until '93 they were all kind of scattered about the building and that was not very good because they tended to just be accommodated wherever they could be accommodated. Although this is only a small school, they were still kind of isolated. So I tried very hard to actually physically get them together and we actually started off in this room so they had a base and they could speak to each other and share problems and that was incredibly important in bringing them together to have a bit of an identity, even though it was a very small group.

**18:**

**19:** In 1991/92 we prepared a submission for RAE and the first piece of advice that I received from the University was don't bother and I thought 'what have we got to lose, we might as well have a go' and I put together a submission. We got a 3d which is highest score in the University which absolutely gob-smacked everybody but I knew that because the RAE is comparative within the discipline. I knew that we would do reasonably OK and certainly having formal research going on here, which is what I call Ph.D work, certainly helped and also the EPSRC studentships, the funding from that helped.

**20:**

**21:** Anyway, so we got a 3d and subsequently got something like £200,000 per annum for three or four years and that really enabled us to get going and it also gave up more credibility, both internally and externally and that was incredibly important. People began to say "how did you get that score, how did you do that?" that's why I felt it was terribly rewarding because you could actually give out some ideas to other disciplines and other colleagues. So you felt you did have a research base and it can't be that bad because you've been funded for it and you've got a rating.

**22:**

**23:** We decided to make the most of the money, invest it wisely if you like and one of the first things we did was to employ a couple of key people in very strategic roles. One was a Research Fellow, post doctoral research for Art and Design and the other role was something we made up because it didn't exist and that was what we first of all called a Public Output Co-ordinator - you know what is that? Well what it was in fact, was someone who could assist members of staff here and researchers to actually get their work out. Most practitioners here would have art work exhibitions or design products or whatever but we felt we needed a bit more strategy on that and somebody who could kind of liase with staff to develop what is now called a publication strategy. The role has now evolved into something that is a bit clearer but absolutely central.

**24:**

**25:** Anyway, the three of us and a couple of the research students we had working with us organised a conference and that was the 'First' conference in 1994 and we got about 110 delegates which was very good, it was very well attended, there was a lot of enthusiasm and that was great because it got people physically here and once you're here you go 'wow - is that they river and is that the mountain'. I think people were genuinely engaged with the physical site and that was very important to get people here because most people had never been to Drury. Most people sort of think its on the coast and sometimes it feels like that but you know, that was important, that they were here that they saw the site, they saw some of the work that was going on, they met people in the School.

**26:**

**27:** From that we decided we would try and publish the proceedings and we did want to do that in a kind of classic book-based format. We'd recorded some of the events on video and made sure that we had all the text-based stuff and tried to put that together into a little, not absolutely multi-media interactive, but a little acrobat document and published it on CD-Rom. That's a slow trickle of stuff that's kind of going out. You know we have requests regularly and we don't sell huge amounts at one go but it's going and I think there's a lot wrong with that but we saw it very much as a experiment in trying to at least give people an idea of who was there and what the audience were like and post the session and the site and things like that. It was an attempt at humanising an event like that and obviously disseminating the content. That was important and that's when the thing more rapidly started to evolve.

**28:**

**29:** Just prior to the conference we'd employed a couple more research fellows and we'd taken a policy decision to only employ research fellows at post doctoral level and one of the benefits of that is that you can automatically get potential supervisors for new research students. So that was an important policy and we began to have what I call a critical mass. I think in 1994 we had three or four research students, three research fellows, myself as Reader and that happened in '93 after we got the RAE results and the public output co-ordinator. So we had a bit of a team for the first time and what you got happening was a great dynamic, which you can't have with three or four people, and you possibly can't have with 15 or 20 but we kind of had quite a nice group. We began to think about developing roles, research roles and I think that had been under-developed in Art and Design research and one of the most difficult roles to develop was this post-doctoral research fellow because nobody knew what it was, sort of, because at that point you could have counted post-docs who were practitionery researchers on one hand. Several of them worked here so we had to kind of develop those roles and we had different sorts of people in those roles and they were all approaching it in a different way. That was quite useful because you had more than one way of developing the role. That has continued to happen and I think that is quite a useful set of options, they are not all doing the same thing in the same way.

**30:**

**31:** The critical mass kind of expanded a bit more, we began to take on Research Assistants, in some cases to directly develop Ph.D work that had been completed so we were kind of trying to continue the thread. Not have a project finish and that's it but continue it on in some way through the sustainability of a research theme and that was important and at that point you could begin to see that yes, we were interested in a couple or three obvious clusters of research. One was definitely a technological one, that's where we got the EPRC money, we were interested in new technology. Interested in multi-media and the second theme is interested in environmental or safer practices, sustainable practices and the third theme which myself and the research fellows have been working on was really the articulation of research methodologies and published and presented papers on that. Those are key themes that we work to although we'd never turn away an exciting proposal that was off theme, I think that is quite important to keep us.

**32:**

**33:** Let's talk a little about the staff in the School because the Research Centre is part of the School and the RAE result was in '92 was largely, well almost entirely as a result of practitioners working in the School. We began in 1993/4 to think about a research strategy and what was it we wanted to achieve, how were we going to achieve that, what were the targets and milestone and priorities and that was really a School-wide thing. We had what we call 'away-days' where everyone gets together and we brain-storm and crystallise it into some sort of strategy. So we began to do that and to me it was important that everybody was involved. Obviously I had my own ideas about what might happen and colleagues had their ideas and it was important that those ideas were extended and tempered by the greater critical masses in School because I think the key thing there was ownership of the strategy rather than me saying "well we're doing this" and everyone moaning and groaning about it. You've got to take people with you. That's not to say we always agree about everything but it is important that everybody believes passionately in the value of research, obviously to professional development but obviously to underpin teaching and professional awareness. So the strategy really focused on the kinds of achievements we'd already got, you know trying to develop from the Ph.D work and also trying to encourage staff to look where they could, where it was appropriate, to develop Ph.D work from their own practices. So we've now got about three or four members of staff who are registered with PhDs and we've only got a staff of about 30 plus part-time people and then of course everybody here had already got their Ph.D or is in the process or just registered. So when this is the kind of formal research aspect of the school and you know we've tried to I suppose just not force - I believe in growing research.

**34:**

**35:** I gave a paper to the Art and Design Conference last year about the growing research quality and that to me is very important. You know I don't want to be involved in anything that is not of the highest quality and so that, I think, is why we've taken a kind of evolutionary approach to research and that doesn't mean to say we haven't taken advantage of opportunities or gone where angels fear to tread. You've got to do that but by and large it's been an incremental growth with hopefully, a critical eye of what is going on. Certainly this group of

people are a very critical peer group and they will say exactly what they think in the nicest possible way but that is incredibly important for keeping everything peppery and lively and it's incredibly important for new research students who have come into a framework. They can speak to people who have gone through the whole process of a Ph.D or indeed who have gone through the whole process of an aspect of Professional Practice and have got great experience and I think that the students that we are getting in now are very, very lucky. They are off to a flying start because by now we've got PhD's through, we've got 5 through and one MPhil, a couple more to complete this year and we've got supervisory experience and we've got examination experience. So we've got to the end of that long view of research and it is a long view.

**36:**

**37:** I sometimes get people coming to see us and they want to set something up like that and I say "well it's 10 years" and it is really ten years because research, especially formal research is a long term endeavour. So you can't just do it overnight and that puts a lot of people off I think because they think 'oh my God I can't commit an energy for 10 years' but that is what it does take and you can't do it on your own, you've got to have everybody with you and you've got to have the most excellent people. So it is the quality thing again. You want to have the best sort of people here.

**38:**

**39:** We're still well funded, we did improve our rating in the last RAE although we didn't get a 4, we got a 3a which was a horrible disappointment to me because I could certainly see no comparison between the '92 situation and the '96 one. We were light years ahead but it's all comparative and relative. Our aim now is to keep that momentum going and to expand on what we are doing and now one of the most important things, but not the most important is really to use that credibility and experience to try and attract external funding for various projects and the show is an example. We've just put in a bid to the EPSRC again for a multimedia project but we couldn't have done those things properly a few years ago even because we weren't in the right kind of position. Why should anybody take any notice of you, least of all give money to you if you are not actually established so that now, you know we feel as though we are now in a better position. We've got a portfolio of research experience and we are in a better position now to use that experience with external collaborators and so it's maturing but there's a long way to go. That is probably one of the weakest aspects of what we have got here.

**40:**

**41:** The other looming problem is the problem of space. We have kind of outgrown this space and having taken a couple more people it is beginning to become a problem. That is not to say that people don't leave, they do. We've had examples of people who have come and got an awful lot and then been given a super job or gone on to other things, but again, an important thing is that if you have spent three years training someone, you are daft to let them go. So what we have tried to do, and I am very passionate about career development for researchers. What we have tried to do is to see that their efforts have been rewarded by promotion to another role and that we actually use the research that they have done and that's extended or seeded into other directions.

**42:**

**43:** I don't know about other universities but this University, it's not just to do with research roles but terribly inflexible about the kind of roles that can exist. We've been inventing roles and inventing jobs and they always say "well is this an RA, what is this?". We could have actually got on a little better and developed much more interesting roles if there had been more flexibility in the University system because I think things like Research Associates who may be have their own businesses or a different relationship, they are not consultants, they are not students, they are out in various industries and businesses but are interested in research. They want to collaborate and there is no way of kind of incorporating those people in the system. So I think what we have tried to do is develop roles within the structure we have got but to me I think that is kind of frustrating because I think there are other roles that can be developed. I suppose it is like everything a drip on the storm, you keep on walking.

**44:**

**45:** We are in a position now where we have got some experience. We have got some expertise. We've got a publication strategy, you know whatever we do is promoted and we've been producing catalogues and CDs and research reports as well as having those things published as well. That is important, external peer review of what you have done and publication and you know, we have expanded but we couldn't have done that without key people in clear roles. We couldn't have done it without a strategy, we couldn't have done it without a ground-swell of general support and we couldn't have done it without funding from the RAE. Certainly it is a major funder and we do a lot of sources of funding but that certainly has been a key thing in being able to expand. If you've just got a limited resource you can't fail with that money. You have got to make sure it works and that engenders a bit of a timid approach. I'm not saying we're going to throw money away but we should say 'well let's try it'. OK if it doesn't work, why doesn't it work? A nil result is as good as a positive result. It is all useful stuff and so we have had things that haven't come off but I think that is the nature of it and that has helped shape what is here now.'

**46:**

**47: PROMPT [Interviewer - Can I put you right back, just briefly, to the point before the RAE where you talked about starting to develop an approach, taking an initiative if you like, how did that sort of come about in the very early days?]**

**48:**

**49:** 'There wasn't a strategy then. It was very much a kind of 'lets have a go' you know we didn't really know what we were doing but thought might as well and it is kind of scary beginnings really. Very dodgy and dithery but if you don't do that you don't get anywhere and I do think it is a case of 'where angels fear to tread' and you know ignorance is an advantage sometimes because you know you apply to EPSRC and other people think you are completely bonkers. Then for some miraculous reason it works and you know you submit to the idea and people think you are bonkers and then they go 'ooh you've got £200,000 quid' so you see it is that kind of risk taking, it all could have come down about our ears but luckily it all came out alright.

**50:**

**51:** It was incredibly hard work and not just from me but from a few key people who had the same kind of vision and believed that artists and designers should be doing research and that some of that research should be formalised into Ph.D work. It was timely in terms of RAE schedules. I think we were kind of just in the second, I think the first RAE was '88 and then '92.

**52:**

**53:** I remember that Claremont went into RAE in '88 and Lin Parry produced a very good paper about Performance Indicators, Art and Design research, and I found that incredibly useful and still we use it and it is still a quality check. That was very helpful but there is very little else that you can externally draw on. You had a sense that there were a lot of people who wanted to get involved but it was - how do you do it? That is a little bit better now, you know the debate on methodology I think is a little bit older and wiser, moved on a bit and we're not now wearing white coats and goggles and there is a bit of credibility in that line, I think that is attractive to younger researchers. I think they can see a way now and it is not getting dreamt up out of nothing. It's being evolved and it relates to methodological approaches in social sciences and even in science and so it's not sort of odd anymore, thank God. We've still got a long way to go, every piece of research that is completed now makes a methodology contribution and that is incredibly useful.'

**54:**

**55: *KEY SUCCESS FACTORS [Q. Out of (the issues raised) what would you say are 5 key factors in the success of the Centre?]***

**56:**

**57:** 'Well, belief that this could actually work but you don't know. So therefore there is a risk factor and an opportunity factor. Once you've taken a few risks, incredible hard work to kind of make yourself credible and gain credibility. Development of a shared strategy. Putting key people into key positions and I think most important for the discipline is always keeping it within or lets say initiating things within Art and Design practice. That is not say that there are a lot of different interesting collaborations now in an inter-discipline sense, cross-disciplinary but being true to what you believe in and what you believe research can do for the advancement of your practice and your field. I think what I have done is on the edge of things, I mean somebody once said to me "well you know its like you do it all the time, you lay in a bit of ground and then you're walking on it and the ground is rolling but you've got to keep laying the ground and walking on it". If you don't do that there's no point in doing it, you might just as well get on with something else that you think you are good at.'

**58:**

**59: *KEY INHIBITING FACTORS [Q. Out of (the issues raised) what would you say could be 5 key factors that have inhibited the Centre from being more successful?]***

**60:**

**61:** 'Yes, there must be more than five inhibitors! Well there are structural things to do with an Art School being in the University system. On the one hand, you know, we have a Research Degrees Committee, who I think, have been incredibly helpful for us but in a slightly obstructive way. Do you know what I mean, it's like hurdle jumping. You've got to do this. You've got to express it in this way and you do in the beginning. That is alright because it is a training. It is to do with developing rigour and academic toughness and integrity and that is fine but in a way I am not saying that that is an inhibiting factor but the general structures of a University who usually don't understand what research in Art and Design is but then it is your job to articulate that and convince them and gain credibility. So it's a general structural difficulty of perception. You can turn that to your advantage I think.

**62:**

**63:** I think funding is obviously a perpetual problem. How do you get going? How do you develop a critical mass if you don't have any

money? You could be in a 'chicken & egg' situation for long enough until you make some kind of breakthrough and that is incredibly demoralising I think if you don't make the breakthrough. If you try and nothing works and you still can't get on and so I think that does lead to general frustration about progress. The funding, I mean the mooted Arts & Humanities Research Council, I don't know what the latest is on that, at one point it was happening then it wasn't, then it was, I don't know, anyway, if we had our own Research Council then I think that would be an incredible oiler of wheels. I'm not saying it would solve all the problems but you know at least we'd be shooting in the right goals. We've been shooting in the wrong goals. So that is an inhibitor. Sometimes artists and designers themselves are inhibitors I think because certain sorts of training, certain perceptions about research, you know - what is it?- but then again it is up to us to articulate that and demonstrate that it is a useful thing so again it is a perception thing about research and the old white coat and goggles, scientific methods sort of looms over things.

**64:**

**65:** An inhibiting factor is the lack of clear career structures for researchers in Art and Design. There are few roles, you have to invent them. There are difficulties in inventing the kind of roles that you want to develop and you know, where do people go? What are the opportunities for people who have gone through a formal research training? I'm very concerned about that and again I think the best people always make up their own jobs, which is fine, because that is ground breaking stuff as well but for a young researcher they can see that they can get so far but then what do they do. I think that is an inhibitor.

**66:**

**67:** I can usually find a positive way around things. That's being creative I think. That is what I like about it especially developing a Centre. It's constructive. I am a Sculptor, construct things and to me this is no different from making a piece of work, it is a construction and you put it together and you pull it apart and walk around it and test it out and that's making art, and teaching for that matter. There are tensions though, I'm saying there aren't you know but fundamentally I don't think they are any different.'

**68:**

**69: PROMPT [Interviewer - You mentioned about teaching]**

**70:**

**71:** 'Yes, yes, all of us teach to some degree mostly at post-graduate level but occasionally undergraduate level. Now two of the most recent research fellows, one of them his research was very much related to the printmaker, very much related to sustainable cleaner hazardous methods of practice and a lot of his work was carried out in the workshops and the studios with the students. So it only seems natural now that, you know, that kind of stuff should be put back not re-cycled, but kept sustained in the system and so I think that's a very natural thing for him to do. He does teach two days a week but it is teaching very much related to his research interests and new interests you know. So that works very well and there's a couple of examples of that. Some people I think at certain periods should not be teaching, you know. I think its about really developing something, you know, not in a blinkered way but very focused and you know, I think there are good times for teaching and dissemination for research and there are not good times. So it depends where you are in that cycle as to whether you are at the right point to disseminate the work and so there's no blanket thing here.

**72:**

**73:** People teach when its appropriate at the right level for the right reasons and I have been very protective of researchers. You know I do not think they should be used as a kind of band-aid for some gap in the undergraduate curriculum and you know, we have kind of fought for that protection but it is absolutely important, you know, that anything we do is fed back, not just here. I mean a lot of us could go out to other places and do workshops and seminars and things and that incredible important as well. But certainly I think our Masters level students have benefited an enormous amount and that perfectly right.

**74:**

**75:** Going on from the teaching, what we're trying to do at the moment is develop some of our research methods experience into a research training programme. So we're developing a Research Masters qualification. That is a Research Masters in Art & Design and we've done two market surveys and the surveys suggests that it should be a network distance learning thing which, you know, is a bit of a challenge for us but, you know, if that's what the market suggests then you kind of got to go on with it. So that is a good way of disseminating what's going on and hopefully a good way of attracting or inducting new researchers into the process.'

**76:**

**77: PROMPT [Interviewer - It's nice that its sort of come back from those core areas of development in multimedia technology]**

**78:**

**79:** 'Yes, it all kind of feeds in, yes it was just the right thing to do. That wasn't particularly strategic we're just fed up with giving out the same sort of information. We've got it and might as well formalise it.'

**80:**

**81:** *The interviewer thanked the interviewee for sparing the time and for being so helpful in respect of the project.*

# Appendix B: Example ‘life-elicitation’ interview - Dean, Case D

**NVivo revision 1.0.118 Licensee: RS**
**Project:** Ph.D Thesis **User:** Seymour Roworth-Stokes **Date:** 19/04/2002 - 10:41:19

**DOCUMENT TEXT REPORT**

**Created:** 18/04/2000 - 12:48:26
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**1:** **CaseDLEBP**
**2:** **Dean Interview with: Prof Bob Putney**
**3:** **Date: 17/3/99**
**4:** **Held at: The Art & Design Research Centre**
**5:** **University/College: Bainbridge University**
**6:**
**7:** ***Q.1.INTRODUCTION [Q. The interview has been arranged to begin to establish the background, context and development of the (Research Centre). As the Dean you are in a unique position in respect of being able to describe the creation, evolution and development of the Centre. I would like to go back to your first recollections of how the Centre was conceived and from this point trace through the decisions, milestone and factors, including where possible the achievements, failures, feelings and emotions, that have led to the establishment of the Centre as we see it today.]***
**8:**
**9:** 'I might go back a little step before that just prior to introduction. As I said I previously worked with Peter. I came here in 1987, the end of 87 and I had a very clear remit of what the Institute, which preceded the University, wanted the School to be and that was to be an integrated school and also to try and build up the school which has fallen a bit foul of various mandates, particularly CNAA so we were in a temporary situation and one of the people that I recognised as being a key player in making this school move in a new direction was Paul and Paul was still working on the final stages of his Ph.D and I made it quite clear that I would encourage him and I was quite anxious that we started to move into, whether it was research with a big R but it was much more into a structured approach to research. Research in the past had just been staff development, scholarly underpinning which meant going doing your own thing and really, there is benefit in that, but I really wanted structured staff development which was very much supported by a Professional Practice attitude. There then came a number of opportunities and I am afraid the whole period was about opportunities. It was, whether it was terribly planned I don't know, but we made bid for the old EPSRC. It was a shot in the dark and it was part encouraged by the previous Dean who was a great researcher and we won it. It was slightly to our shock but it was also to the shock of the EPSRC who 'phoned up and asked if we had made a mistake - an Art School putting in for an EPSRC which is hilarious but you know, they have always been scienced based and at this Conference yesterday somebody boasted that they had got a EPSRC grant. Well that's alright we've got lots since. But that's where it started. Having gone down that road, we realised we had to get supervisors. We had no-one who could supervise so we had to draw people from the wider community of Bainborough's and particularly the previous Dean Professor Fullerton. He was great to support this. It was from there that things started to mushroom. Very soon we had three EPSRC grants. We decided to fund others. We bid for money within Bainborough's and the real watershed came when the first RAE that we engaged in in '92 was a battle with the University that we should be allowed to submit because art was seen as that silly activity which after all the serious work goes on in Pharmacy, Engineering and Science. We won the battle at the last hour, it went forward and we got a 3 and that shocked the University because nobody else got anything. I was immediately tranferred from the Head of School job into this job [Dean]. The two don't go hand in hand but it just seemed to be like that. Having done that and gained quite a lot of money, we decided that we would try to create a research unit. It was not called ADRC then and we were very clear at that stage we had to have an acting Head of School, that it was to be an integrated part of the school. It was not to be separate. It was physically together, actually combined and Mike was very much at the fore. He was one of the EPSRC funded studentships. The other was a lady called Jo Upton which about colour. The first one was all about colour. They were all a bit science based. One was a

difficult one. I know Mike's was the first which was ceramic glazes - he doesn't like me calling it that but it used the people in science and they helped supervise Mike and they guided us through and they started to understand the sort of rather strange way that Artists work - and that really blossomed and they, partly because of Mike, they all became wedded to him. The second one was a lady called Jo Upton who intermitted and hers was a case study funded by Textile UK and it was trying to develop a colour database so that the company could transfer accurately colour information from Scotland to their buyers in America and backwards and forwards. Then there is the one on communications - but we wanted it wedded within the School and we wanted as many people in School involved with them so we started to encourage the breadth of supervisory teams to engage people within the School so we moved to starting buying people in. It had to be structured in this way because we got RAE money, it was lot of money for us then, I forget what it was, 120 something thousand pounds but it seemed a lot to us and we wanted to ring fence it so that it didn't get confused with the teaching and Paul started to manage that. He brought in people like Rachel Brown, who you may have met, and others, and we deliberately decided that we wanted a core of research studentships - all that were practice-based and that, really, is the thrust of the whole research and it relates to what the score is. The score is about practice-based activity. I'm not saying that we throw away the theory - far from it - but the direction of the School and perhaps it is not dissimilar to your Institution - you still keep our hands on materials rather than some of the people that we had at the Research Conference yesterday, they're philosophers and social anthropologists, perhaps there's role for them but we're not sure how it relates. So it really grew from that, since then it has grown like Topsy a little bit. It is controlled, it is very much integrated because we are different to other Institutions. We decided not to get a policy of going out and buy stars, Paul's view was that we have some quality people here and we could grow our own and he gave a lovely presentation on it. It is called Grown Your Own. It irritated some especially if they'd gone out with their big cheque books. But it really was that how could we make the most of the staff we've got and we are always bringing in new staff and it was something special. So Paul has been growing his own and he's grown quite a team. It's recent move to become the Art & Design Research Centre, ADRC, was quite a deliberate one by the previous Head of School, in so much that it was perhaps started a ring fenced activity and although it is physically different, it is physically separate from the building because of accommodation reasons, and we still run great symmetry between the undergraduate activity and the postgraduate but by putting the postgraduate in with the researchers, we saw there was a clear symmetry between those two. Whether you'd call it a Graduate School, that is a long shot, I don't know, there has been debate within the University about the integration of Graduate Schools. As a Faculty we are not keen because we feel that it may undermine the integrity or the undergraduate experience if you remove it into a separate building, separate faculty and we do wish to retain it and we try in this Faculty to have a symmetry between the three schools at research level. It is between the built environment, architecture and people like Mike helped to make it happen.'

**10:**

**11: PROMPT. [Going back a bit, to that key time when you first started I suppose, when you saw there was the need to move into Research. What led to that?]**

**12:**

**13:** 'I guess there were two main reasons, one having done an audit of staff for my own benefit, I saw a lot of potential in Paul and at that stage he was a lecturer and I really believed that Paul would blossom in another way and it was about a structured approach to research because that is what the Ph.D was looking at. The structured methodology, the learning experience and how it underpins that and I didn't want to lose that and I certainly didn't want to lose Paul. The second strand really was that the School has always had this lovely old-fashioned approach to structuring of the week. Four days thou shalt work and the fifth day you have off. Now, although I am slightly cynical about that now, I think it has been important to give the School a certain character but what I wanted and I was certainly being leaned on from on high in the University, was that that became a structured activity. It was not just I go and do my gardening. I'm using Peter's terminology there, weeding the beds. I tried very hard to focus staff development on yes, professional practice which is fine, but that was incumbent on all of us therefore we should look at Teaching and Learning methodolgy, Paul's aspect very much, because it was I'd say Dickensian, but it was different to what I'd experienced before and the other to try and introduce IT. Teaching and Learning methodology is like a lead balloon. IT was well, even more difficult because we only had one BBC computer, I think Paul had it at the time. But we were successful, it was a time of opportunity really. We got back some money from the then National Office - we didn't have Funding Councils then - and brought in computers, which started to change some aspects of the School, some of the ways in which things were delivered. We then tried to marry teaching and learning with IT. Behind it all was, and I suppose it was what attacted me to the job, I recognised this huge potential here and if only we could do something wonderful, we wouldn't be the nearest Art School to the Coast. When I got this job, I was on the Committee of Art and Design and John Lowe was on - you know John Lowe down at Northwood - John said "Yes, I'm going to take over the School of Art that is nearest to the North Pole" to my response to that is "Well I am going to head up the School of Art that is nearest to New York" so it just became a little bit of banter but I think it was a personal ambition that we really had to get great on the map

and as I said, it is down to Paul's energy and enthusiasm. He has done that. OK we were eclipsed by Denison last time in the way in which they got a 5. I think they are going about research in a totally different way. I think they are complimentary to us. We would never wish to mimic them. There is the horse and there is the tortoise and I'm not saying which we are here. It is different. Substantial funding. That is one of the differences between the regions - there are lots of differences but one of them in terms of research is that if you compare what we got for our Grade 3 with Banborough which is only just the other side of the border, which got the same score, I think we got three and a half times the amount of money but it was the formular that our Funding Council applied plus there was another factor. The factor came that we had involved a large bulk of the school and I think the tactic Paul applied there was very sensible one.'

**PROMPT. [So the approach was that the drive was through Paul, in terms of the strategy?**

'Yes, once Paul had been put on the track of research, there is no stopping her. He has to take the credit for it.'

**PROMPT. [I suppose in terms of the synergy that obviously existed in terms of those objectives, that made his life easier in terms of getting resources as well?**

'Yes, I think that is my role, that once Paul had started on the track and agreed to go along that line, I can't remember if there was a day when we agreed, I don't think there was. It was just a meeting of the minds sort of thing. As Head of School, I'm now Dean, to ensure that there are sufficient resources to keep it going on the track we want. Paul will expand on the track when we meet with him this afternoon, but I do think it is about building a very sound foundation of research practice that is then supported by a core of people that are gaining daily by credibility. It isn't going out and buying the stars, it isn't about one or two people having great exhibitions. That is part of it but it is a lot more than that and hopefully we can keep the team together as much as we can.'

**PROMPT. [So is it actually a very cultural change which has been brought with it?**

'Yea, and I think it has changed the culture of the school. The school is much more positive and other things have happened recently that perhaps that have channeled some of that back but despite all those things that have happened in the region, the research has retained that clear focus which is very, very important. I think it is, not only to the School but to the staff.'

**PROMPT. [Carrying on from that, the integrity and credibility that I suppose that you mentioned about - when the money came in from the RAE, it was particularly unexpected for the rest of the University, it has probably had quite a dramatic affect in terms of profile?**

'It did, yea, and it still does. There are some other issues that we've now got and again areas that nobody predicted, certainly not on the Research Committee, who I suppose they'd have put up their salaries on Pharmacy or Engineering getting all the money and they haven't. I'm not gloating over that. I think it is disappointment that those areas haven't made the progress but perhaps it is that we've identified an opportunity and we have just really worked at it and particularly Paul. It is sound base but the credibility yes, the credibility for the School of Art and Design because the School prior to '87 was certainly not the Jewel in the Crown. It was seen as a bit of a liability. The School is seen, I think perhaps after the RAE it was the Jewel in the Crown, I think it is now seen as one of the Jewels in the Crown, perhaps it is just the way the University is looking at itself, it has got a variety of strengths and I think that is great. But it isn't all right - there is still a long way to go you know. I think we have made a lot of progress in some of the art aspects and some of the fly design but there are other areas and though the developmental which we went through was great, we just came through really with a in-built environment. We are trying to build something there so I think they could feel that they haven't got the confidence, the same degree of confidence that you get within Paul's team in the School of Art. There is some wonderful research going on in the environment but it doesn't have the sense of prep art where you've got a historic research unit which is doing absolutely wonderfully, sort of science/technology work. There are other projects within the built environment that are also pretty worthy but they are getting nowhere with the RAE. It is something that needs to gel together.'

**PROMPT. [Why would you say that that might be the case - what is the critical difference?**

**33:** 'They haven't got a Paul. But no, that's part of it and I think it is perhaps that there isn't a clear vision yet. It is beginning to form and that is encouraging. I think the other is that within architecture it seems as though it is a difficult area - they love to wear their hair short all the time. If you look at all the architecture course they have all got pretty appalling RAE scores, you know they've all got 1 and 0 and they've not made progress. I think also the issue that where Fine Artists will carry on their Professional Practice for instance, they go to exhibitions and the debate was one that exhibiting one's work is a form of publication, but architects who do their work, the majority of them it is good wholesome architecture which leads to the production of a building but it isn't seen in the same way in terms of a publication. They've been rubbish here but it is a problem that they've got.'

**34:**

**35: PROMPT. [You talked about that vision and approach and not necessarily settling where you currently are now. In terms of the Centre, where do you think that is going?**

**36:**

**37:** 'Do I give away trade secrets? Um, explore it with Paul as far as you want to. It is certainly not going to stand still. It will be moving into newer areas a lot to do with the new technologies. Has Mike told you about the new course - the whole move within the University strategically towards a virtual campus. There is some incredibly exciting work going on in that area and one of the early successes we anticipate within the virtual campus will be the new course. Now that said, it is keeping us on the map. But it is one of the strengths of here is that people can quite easily work as teams across subject areas within Bainborough's. You get the same degree of territorial dissent that happens in any University but it is quite easy to develop, we're small, it is easy to develop a relationship with media people, electrical engineers or offshore engineering or whatever. Where there is an opportunity, people will work together. That is one of the good things, teamwork in that early stage. I think there was a chemist who was Junior Supervisor and he became as committed to a culture in which Art and Design flourishes as any of the staff. He was wonderful. I don't think he will ever go back to Chemistry. The previous Dean who was an environmentalist who was all about sustainability, he too embraced aspects of Art and Design methodology to start questioning his own methodology but he again, was a very active supervisor and they were happy to work with the School of Art and that was my brief, was to bond the School of Art into Bainborough's or it would go and when your salary is on the line but the staff were very willing as well, they weren't you know 'well all I do is paint and I'm not going to talk to anyone else' it's OK some work like that and will always work like that but the majority of them are quite happy to start to look at new relationships.'

**38:**

**39: PROMPT. [It is interesting with that as well, that you said that that sense of teamwork and wanting to work together that's interesting - why do they?**

**40:**

**41:** 'Well just look at it. It is a wonderful place to work. It is a bit claustrophobic at times, a bit like working in a village. Not dissimilar - middle classes - but everyone knows everyones' business but you can get to places quickly. You flew in presumably this morning? I was in London at 8 o'clock last night and I'm up here this morning and I left yesterday morning at 7. I think I was one of the first people at the conference at 10, well the links are good. There is a lot of vitality here and generally I enjoy working here because, and I think it would be true with the people who stay, is that people do work together. There is not a lot of tension and fighting and bitching and because it is small we can get things to happen, we don't have to go through endless committees. There used to be endless committees, a sort of CNAA model of committees but if a decision is to be made about how Paul spends money, well most of that is delegated at her. It's better, he is empowered and that is what we want. We don't want to have people asking every time they want a washer they come to me and ask me to sign something. It isn't a threatening accountability, it is much more meet the objectives that we have set.'

**42:**

**43: *KEY SUCCES FACTORS [Just to bring this together then, to summarise, how successful do you believe the Centre to have been?***

**44:**

**45:** 'It has been successful in so much that it has provided almost a vehicle of credibility to The School of Art. I always felt that the School was a credible School within areas and this was a way it manifested it. It shocked all those Doctors on the Research Committee that we could do it and they still make excuses but the Centre has achieved that. I think for individuals it has given them the strength and confidence and credibility that they can stand up and be counted with, you know, the growing research community in Art and Design. I think there is an external dimension that it is recognised as having this credibility. I think this is what success is about. It comes down to the individuals. In terms of success the sums of the money that it has brought in and it is not to be sneezed at. We get what about three hundred thousand pounds from the funding council but that is then being matched with the bids that Mike and the rest of the crew get. You can't get

away from the fact that it is bringing in a lot of cash and that in turn, because we are growing our own, is, I think re-inforcing the staff who teach on the undergraduate programmes, constantly updating their structured research programmes that they have to bid for. It isn't there just for the asking. They are not a secret society - in some ways I regret that they are in the annex but on the other hand they needed to be in a space that we can access 24 hrs. That was one of the issues where access, that is still the issue and that we addressed as we have very long hours but they can come and go as they please there.'

**46:**

**47:** ***KEY SUCCES FACTORS [Two more questions - Can you describe the key factors which you feel have contributed to its success?***

**48:**

**49:** 'Having the right Leader to start with, Paul. It is not just his personality but he is not only a leader but he is also a good team player. He gets people on board. He is very demanding. He sets incredibly high standards and it won't be comprised which is right. So having the Leader there is essential. I suppose it is hitting the cash back occasionally, you know the opportunities, whether it was the EPSRC bids that we were successful at which, it was bit like the Lottery, but having got the cash, the cash develops the confidence, the confidence then generates more and then once you've got the cash and more coming in, you start bringing in the right people. I think Paul has got an amazing team of people out there and every one has a exciting story to tell and every member I'd be very disappointed if they left. They must be a very valuable commodity elsewhere. I think approaches have been made to people but we just have to make it attractive to try to keep them here.'

**50:**

**51:** ***KEY INHIBITING FACTORS [On the other side of the coin can you describe the key factors which you feel have contributed to its success?***

**52:**

**53:** 'I was going to say the Research Committee but we shouldn't put that down. But no, I think in fairness, I think we have got a good place at the table now but originally it was an inhibitive factor. They didn't believe Art and Design could do it. I think it was Paul's tenacity, his persuasive arguments, his credibility that helped to change that. So in some ways there are pluses and minuses. We often used to think if only we could have the ride we'd go faster but on the other hand we can't say we're there, we can't say we're demanding and they expected a very rigorous approach to research. I think it has established a sound foundation and that is what we have created, a foundation for Art and Design research of which it will grow in future. It isn't going to be static. I do worry whether/how it is to going to go after this. If it grows in numbers and that is my problem. We have got something in our Strategic Plan of how we address that as well.'

**54:**

**55:** **PROMPT. [Any other inhibitors do you think?**

**56:**

**57:** 'I think the RAE in some way is an inhibitor because I think it is very much process control and I wonder whether it is doing the right thing for research. It is making people think about how they score the goals rather than how they score the goals. I don't have a problem with some form of peer review, I just have a lot of worries about the way in which it is conducted. Whether it is the personalities involved or whether not, I think it is a lot to do with the criteria, it is constraining and I think the credibility of the whole exercise was certainly questioned in the last exercise. We could see where the fives were and five stars. If we hadn't got the RAE money the first time round, we would have still, I am quite sure, remained committed, wedded to the idea that research was fundamental to our success and we would have found the money one way or another. In the early days before the RAE we actually just top-sliced our teaching money. It was 7% of our annual budget we set aside for so-called staff development. That embraced things like research but it was a deliberate policy to do that. If we didn't get the money from there, we'd get it from somewhere else. RAE is just making perhaps. I can't think of any other inhibitors. I'm sure Paul would say the janitors but?'

**58:**

**59:** *The interviewer thanked the interviewee for sparing the time and for being so helpful in respect of the project.*

# Appendix C: Example 'semi-structured' interview – Research Director, Case D

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**Project:** Ph.D Thesis **User:** Seymour Roworth-Stokes **Date:** 15/09/2002 - 09:29:01

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1: **CaseDSIPW**

2: **Research Director Interview with: Dr Paul Wyatt**

3: **Date: 17/3/99**

4: **Held at: The Art & Design Research Centre**

5: **University/College: Bainbridge University**

6:

7: ***INTRODUCTION-Thank you for agreeing to meet me again as part of my research study concerning the development of Art and Design Research Centres. As part of this second phase of the research I would like to explore success factors through a series of semi-structured questions in order to investigate the procedures, systems and processes you have developed as part of the every day running and management of the centre. I do have quite a few thematic questions to run through so if some of the questions seem a bit repetitive I do apologise. As was the case with the 1st interview our discussion will be totally confidential and all references to people and recognisable locations or situations will be codified for purposes of analysis.***

8:

9: **THEME A) LEADERSHIP-Entrepreneurial/ intrapreneurial personalities**

10: **QA.1- How do new initiatives or ideas get developed within the Centre?**

11: OK, I may have mentioned this before that we have a kind of regular briefing meeting, this is fortnightly now, we used to have them weekly but now fortnightly and really you know, that is a chance for people to report on what they've been doing, their progress and if they've got any problems and to raise matters of common interest or issues that, you know, we think we should be discussing as a group and that is quite a usefully mechanism and most of the issues, you know, tend to be operational or, you know, nitty gritty issues but occasionally, you know, we all agree that we need to develop, say, like a web strategy or we need to look at funding. So, you know, they go from operational to strategic and what we would normally do once we've identified an issue is to then have a separate meeting where we can thrash things out. Initially kind of brainstorming and then, you know, probably coming to some consensus decisions and obviously a lot of these issues might relate to the School strategy of which the research team is part of the whole thing and you know, may be institutional matters, um, an example there might be where we have been the first area to submit a digital thesis or a thesis in digital format. Now that has, you know, amazing implications for the university and so then these issues come up at research degrees committees so, you know, it comes up through the whole system and it is kind of proactive as well as us reacting to things that we need to discuss in a strategic sense.

12:

13: **QA.2a-What would you say are the objectives of the Centre?**

14: I would say that the main aim is to promote significant high quality research, practice based research, um, that's the aim for the School, the Centre is really the kind of, you know, driver for a lot of those initiatives and um, you know, staff are part of that, you know, we would be working with a lot of projects now in collaboration between designated researchers and those teaching staff who are research active and groups, so um, I think it catalytic in one sense and you know, helping develop strategy. I think a great deal of it is about taking risks, you know, some things we are not quite sure about but we'll give a try anyway and what the hell! If it fails well then we'll learn something from it. If it works well that's good, it could be transferable in lots of ways, so I would like to think that the research centre was

a kind of research engine for the School and was a kind of enabler and facilitator and enabler.

**15:**

**16: QA.2b- How were those objectives were derived?**

**17:** NOT ASKED IN LIGHT OF RESPONSE TO QUESTION QA.2a

**18:**

**19: QA.3a-In your experience would you describe yourself as someone who: a) is always coming up with new ways of doing things, b) puts things forward after careful consideration, or c) likes to keep things pretty much as they are?**

**20:** Well, to be honest, probably a bit of all three. You know, I mean I think there is something that if they ain't broke don't fix it, but then obviously you can't remain static and, I'd like to think that, you know, that I could kind of raise issues in a strategic sense, you know, let's think about what might happen, so it is kind of intentional thinking, future planning you know. But I have got to say that I do very much rely on respect of the views of the people I work with, you know, from the newest people to the people I have worked with for a while and that to me is very important, so, you know, although I do come up with what I think are interesting ideas, it is about team approach to the whole thing, because if they are not with me, then I'm not going anywhere.

**21:**

**22: QA.3b-When new ideas are put forward by other people would you describe your normal response to be: a) lets test the water and see what happens, b) lets way up all the options before doing anything, or c) lets stick to what we know well?**

**23:** Well, you know, it's got to be a) and some of b). I'd like to think that all decisions were considered, um, but then you know, if you consider things too much you perhaps don't get anything done, so you've got to have a bit of lea-way and flexibility in the organisation and management with the whole thing where you can, um, take risks or try something new. As I said, failure is as interesting as success.

**24:**

**25: QA.4a. On a day to day basis, would you describe your involvement in the Centre's work to be: a) hands on, closely involved with ensuring work is accomplished, b) hands off but aware of what everybody is doing, or c) remote at times with limited awareness of what's really happening?**

**26:** Most of the time, I'm a) I think. We're a small enough group although, you know, I think we are reaching a kind of critical size. A small enough group to need to know, want to know what is going on, what projects are progressing, how they are progressing and about people. Are they happy? Are they progressing? Do they have any problems? You know, I think that is one of my roles but then there are certain projects where I have absolute trust in project leaders who are working a senior research fellow level or research fellow level and which, you know, give them responsibility and trust in their judgements.

**27:**

**28: QA.4b-Obviously mistakes occur in such a busy environment as a research Centre. When they do happen how do you normally react?**

**29:** Um, well I mean I would discuss the whole situation and um, try and find out why. If I thought somebody wasn't operating, you know, in a professional way or at a certain level, then I would certainly discuss it with them and suggest ways in which they could improve their performance and certainly I have had situations where I haven't renewed peoples' contracts but, you know, hopefully in kind of the most humane way. So, you know, I think keeping quality in that situation is very important. That's the bottom line and I wouldn't just employ somebody you know, for the sake of it. They have got to be doing the job.

**30:**

**31: QA.4c-How do you react if projects are not competed on time?**

**32:** Well, that's often the case, not really for any lack of you know, laziness or mismanagement, you know, life intervenes and there are a number of examples where projects are still going on, you know, that should have been completed a year ago but again it is to do with the balance of achieving a quality product and artificially keeping to a time scale. You know, I think although resources and resource management. You know, at the end of the day if you know you're going to get something good, then I'll stick with it.

**33:**

**34: THEME B) BUSINESS MANAGEMENT-Business strategy**

**35: QB.5a-Moving on to the future of the Centre, do you have any development plans beyond this year?**

**36:** Well, one of things that I'm aware of now is that we have got about seventeen or eighteen people all in designated research roles and although I don't see a huge increase, you know, there might be, I want to keep research student numbers going, I do think we're getting to the edge of the coherent body of people and um, you know, we might get to the stage where you've, you know, got to kind of have sub-teams, if you like, working. I mean just of example, and I don't necessarily believe this, but you might have a design, or a fine art sub-team or you might have a mixture under other themes, and you know, I think that is a kind of operational thing, who is responsible for whom, you know, the kind of line management. We have already got delegated responsibilities for various projects and I think that works quite well. People know what they're responsible for and to whom but I can see that if there is anymore sort of growth, you know, you might sort of reorganise the way we manage things.

**37:**

### 38: QB.6-How did these plans develop?

**39:** NOT ASKED IN THE LIGHT OF ANSWER Q1

**40:**

### 41: QB.7-Can you describe how these plans relate to that of the faculty and the University as a whole?

**42:** Well, you know, I think if you do accept the idea that a research centre is a sort of engine driver or catalyst or enabler or facilitating body, then you know, I think it is an important part of the institution's energy if you like. Obviously underpinning courses as well as performing in a kind of RAE sense and gaining funding. So although we do operate in a slightly different way, there are other centres of research in the University that are self-funding, that for instance there is a new food, nutrition centre, new food technology. Because of the area that they're working in, you know, that can be self-funding and you know, I very much like to think that we could increase our external support and external income but you know, at the moment we don't have a research council. It is difficult, you know, to actually see yourself as a kind of self-funded centre and I don't necessarily think that is always the right way. There is some danger in that of being perceived as a separated centre that is not embedded in a School or relates to other Faculty centres. So, I mean, with regard to Faculty, research is more or less, it is definitely structured at a School level but there are kind of bridging things like, for instance, Faculty research subgroup for whom I am the convenor, and so I do have an interest in what is going on in the built environment and a lot of their concerns are our concerns like environmental issues, sustainable design, obviously design practice in it's broadest sense so we do share events, seminars, where design is the umbrella.

**43:**

### 44: QB.8-Does the Centre receive any external guidance?

**45:** Do you mean external to the University? [INTERVIEWER-Both really, you know, the other side of the fence to the University also] Um, well let's deal with input from the University from colleagues of the Faculties. Yea, I've always found that a great help. There might be systems that they have set up that are useful to us and I would thank them for them, try and use them or adapt them in some way. Obviously the University has a research strategy and you know, we have got to be consistent with that. I don't have any problem with that really because we are part of it, you know, we are consulted on it and we can have some ownership of it. Externally, I think it is very important that you know, you know what your colleagues are doing in other institutions and how they're conducting research, what kind of structures and mechanisms they might have. I mean I think that is just part of keeping a professional awareness of what is going on and how your centre relates to it and you know, we'd always look at key things like the Dearing and Harris Report and post graduate education etc. and take all those things as kind of useful things and see how you can use them in your context, so yea, you can't have a isolated vision, you can't have, you know, so singular a vision that you know it doesn't connect with anything else because if you don't connect now you're dead.

**46:**

### 47: THEME B) BUSINESS MANAGEMENT- Financial management

### 48: QB.9-I would now like to move on to the financial side. To start with can you tell me whether the Centre has financial targets and if so how are they set?

**49:** Well, again we see that as a School issue. We are asked for these kinds of things by the University and it is usually on a School basis of which the Centre if obviously a key part. So we would decide on you know, the level of income and look at and analyse expenditure and plan we've got to do that every year and make sure, you know, that we can support an encourage everyone who wants to do research as well as focus on some groups who we know that are going to attract external funding or you know, go for international success so in kind of planning that, I would like to have a kind of well spread sort of support but I think increasingly you're trying to identify focus areas that will perform in quite a targeted way.

**50:**

### 51: QB.10-How are these finances then reviewed?

**52:** Yes, they're reviewed all the time. I mean it is my responsibility to monitor and manage the research budget you know and that is made up of RAE money and other external things and you know, it has got to be allied to the strategy and names etc. obviously but you know, I think I am always kind of looking ahead, I'm planning now for the next financial year and you know, trying to monitor and analyse what we have spent things on so I think it is an ongoing process, I mean you just keep these things in your head all the time hopefully so you don't get any nasty shocks later. Or nice surprises. So, you know, I think it is a constant process. I mean I am dealing with all the staff in School more or less, you know, because most people are funded for research in some ways. You know, we have an annual process of inviting proposals, costed proposals you know. Developing them and funding them and that's an annual cycle which is quite well established and giving people criteria for you know, what they should be suggesting as a good proposal and relating that obviously to external things like the RAE and performance indicators in the RAE and other external demands so you know, that is a continuous process, obviously related to budget management and control. Having said that, although we might set out to plan quite closely, you know people are people and they can't do what they say they'll do or they're ill or something happens so you know, you've got to have flexibility in the whole system.

**53:**

### 54: QB.11-At a project level, how would the Centre go about deriving a figure for a research contract?

**55:** Well, if we take the example of, at the moment there are a couple of projects that are funded from NARP National Available Resources Project which has a particular meaning in the region in that people forage for things in skips, that's called narping but it has got nothing to do with rubbish it's just a coincidence. Yea, I mean we would obviously in those instances we went to them with proposals and obviously they were well thought out, they were costed, they had a time scale, you know what I mean, all the usual kind of things that you would include in a proposal and again there is a system really for kind of developing those proposals and reviewing them. They would be discussed, you know nobody would develop something in isolation. We would circulate it, add comments, you know revise it. We have actually got someone working with us who is in the role of external funding development consultant and he works with people to develop bids for funding. So, you know, it would go through the mill really before it left here and most large scale bids must go through the University's finance checking system so, you know, it is fairly sort of rigorous and there is a handbook on all this so you know, there are sort of guidelines, quite clear guidelines. I think especially externally funded ones where accountability is key you would have regular project reviews. The people involved might give presentations. Obviously we would be encouraged to give external presentations which might be published in some way and you know the accountability for use of funds related to the development of the project would have to be very transparent.

**56:**

### 57: QB.12-If this bid was successful, how would the project be monitored?

**58:** NOT ASKED IN THE LIGHT OF ANSWER Q11

**59:**

### 60: THEME B) BUSINESS MANAGEMENT- Personnel management

### 61: QB.13a-Looking at the management side, how would you describe your approach to leadership?

**62:** Well, I like to be, I mean I am part of the team you know, I'm not a kind of individualistic megalomaniac. I would want to be you know, leading the team, you know, and in some instances not necessarily leading, there might perhaps be other people, you know, that would lead something and I would be supporting them in some way so, I mean in a way, you know, the infrastructure and projects that go on in it are kind of more important than people, you know. I think if I got run over by a bus this place would still function because, you know, we have developed systems and mechanisms whereby other competent people could develop it so I think that is a really important factor that you set, that you might have set something up, you might have had ideas about this, that and the other, but at the end of the day because they are shared people know them and own them and they can do something with it. They might not do something that you would have wanted but it doesn't matter they can do something. So that to me is more important than you know, that is about I suppose, facilitating leadership in you know, the team. Whoever might then kind of go on to do it well then enabled to do it.

**63:**

### 64: QB.13b-What skills and experience do you think you bring to the Centre?

**65:** Um, well I'd like to think that I was, that I did have vision and that I was, that I could develop strategy. Um, but in relation to the

context you know, I think knowing your situation and what is feasible. You know I am a optimistic realist and so you know, I would like to kind of think that things could develop and progress but you know, I think you've got certain resources and that's what you have got to deal with, so yea, I hope that I always try to encourage quality. We have been talking about that quite a lot, you know, and the significance, I think we're past the stage of what might be called maintenance, you know, I think that's all kind of in place and what I am most interested in now is in development and innovation, we see those as like three stages of quality and I think, you know, at times we are hitting bits of innovation which is good. I've probably said this before but you know, it's not changed, it is important that I am a practitioner and it's important that the people I work with know what I do and that it is not a kind of closet activity and they share, you know, recently I've been involved in a project where I have been working here with a couple of other people developing a piece of work and you know, I think that is good for people to see that you are actually doing it that you're not telling them to do it and you're doing it yourself. So that to me is very important. Why should anybody take any notice of me if I don't kind of practice what I preach and that goes for teaching as well.

**66:**

### 67: QB.13c-In what way do you feel this benefits the Centre?

**68:** NOT ASKED IN THE LIGHT OF QUESTIO QB.13b

**69:**

### 70: QB.14-Does the Centre follow any staff training and development procedures and how do these operate?

**71:** Yea, well there is a University, quite a good University provision of staff development. Generic things like presentation skills for management, communication skills etc. which are very good and I do always encourage, especially new people, to get involved in those things. I think it is very important that everybody who works here is actually going to conferences, not just sitting there like a sponge but participating actively, giving presentations, contributing to the debate and we'd always support that, we'd always fund that and internally I would like to think that happens by osmosis, you know good practice is transferred in engineering teams for projects where younger researchers can learn from more experienced ones so there is a kind of peer group thing going on there and you know, I think if we take anybody on there is a kind of expectation that what we are all looking for is quality and you know, activity and critical appraisal of what we are doing so you know, what I have explained, part of developing proposals and projects would be discussing key issues from them in a critical way and that I think is part of not necessarily training but a cultural thing, being in a research centre. Now that is how I see it, if you ask some people I would hope that they would identify that as well as that is what happens - that we're all speaking to each other and helping each other.

**72:**

### 73: QB.15a-How are individual roles and responsibilities established within the Centre?

**74:** Well, I do think that is quite a personal thing. I'd like people to be doing what they want to do without being kind of indulgent about it but essentially if they're not on that particular track then they're not going to be performing to their best ability so you know, I think I would always encourage people to extol in their own areas as well as you know, consider development in new areas which is probably a natural thing anyway, quite naturally and take on new things so I would always encourage people to sort of you know, explore new areas for research and also try and develop their own career structures which you know, if not particularly expansive for researchers, not in this Institution, they're very kind of rigid roles and salary scales and researchers are poorly paid really and people do it for intrinsic motives rather than extrinsic ones but yea, I would like people to be the best at what they think they do well.

**75:**

### 76: QB.15b-Are these responsibilities monitored in any way and if so how?

**77:** As I say, we do encourage people at all stages of the project to expose their work to their peers in a professional sense, so you know, even if someone started with us in October as a Research Assistant and is about to give a major presentation at a forthcoming conference, within about six months I think that is a pretty good goal you know, she's developed the project, set up a strategy linked with number of external agencies and now this can all be reported upon and I would like to think that there is a regular sequence to that throughout the project where work is getting out. It is no use doing work and it remains hidden you know, it is implicit that the work must be exposed to peer feedback and review and development of public output is part of everybody's remit so it has got to be disseminated.

**78:**

### 79: QB.16a-Who do you feel are the key people within the Centre and how did the Centre attract them?

**80:** Well, I just head hunted people and still do. Yea, originally I mean for me, we wouldn't really have got far without having people in research fellow roles, you know like Mike Newel and Rachel Brown who are Senior Research Fellows in different areas and to me they are

my right and left hand and they are my greatest critics which is good in a way, you know I really respect what they say and so you have got to ... I don't think you can operate just as a one man band, you've got to have a couple of key people which are part of your vision team and you know, the development of those specific roles I think has been important, I've maybe said that before, you know, we have taken great pains to identify what a Senior Research Fellow should do, what Research Fellows should do, what Research Assistants should do etc. and try to develop new roles as well like external funding development and publications design, things like that you know. It has got be a team approach.

**81:**

**82: QB.16b-On a personal level, how do you feel the Centre responds to you as a researcher?**

**83:** Well, I have created a monster. No, good actually. I'm probably my own worst enemy but as I say, recently I have been with a very tight deadline to make a piece of work and everybody knew that and I was protected for a whole week. You know, people were fending things off and not pestering me and occasionally popping in and out and saying "Can I help?" and things like that so you know, I am pleased to say that when I do need to do things like that, they are very kind of helpful and respectful and you know, that is good.

**84:**

**85: THEME B) BUSINESS MANAGEMENT- Technical competence, and communication**

**86: QB.17-What previous education and training experience has been of help to your own work within the Centre?**

**87:** Well, I think just operating independently, you know, if anything, people are very critical of Fine Art education but really the education I went through is that if you don't do it yourself, you don't do it and you know, you have got to be able to operate in quite difficult situations on your own, you know make up structures and constantly equate constructing things here in the Research Centre with constructing work, you know, to me there are great similarities and you know, I like to think I can invent structures and try and amend them and so I see it like making a piece of work.

**88:**

**89: QB.18-Have any of the staff had experience in industry and if so how has this benefited the Centre?**

**90:** Well yes. Again, a recent recruit used to work for Welcome, there are lots of good things about that but in terms of working practices he is very rigid and he thought that was kind of inhibiting in a way so he was making some interesting comments about you know, OK there is organisation, there are mechanisms, there are strategies, but at the end of the day I let people work as they want to, I don't care how they work as long as they produce the goods, that's fine. You know, they can work in Timbuktu, twenty four hours a day for a week and then have a month off if they are coming up with the good and it is benefiting the whole group then fine.

**91:**

**92: QB.19-How accessible do you feel, is the Centre's knowledge of contacts and information on current research issues is to staff working in the Centre generally?**

**93:** It is not as accessible as we would like. We have been discussing this actually, we feel that there is a need to put out regular batches of information about current issues, about funding opportunities, about all sorts of stuff that would be useful in a wider sense so we are actually going to produce an e-mail and paper-based - I don't know what we're going to call it - not a newsletter, a kind of briefing pack or something because yea, you know, people do find out here in the course of developing research very specific resources or databases or contacts, organisations, and a lot of the time we haven't up to now been terribly good at disseminating that. Only in ad-hoc way, you know. You meet somebody in the corridor and you say "By the way have you seen so and so" and you know.. but .. that could be much better organised because people need to know what we are doing, people need to know what information there is that they could use and the other thing that I do quite regularly is the kind of memo to all staff about current developments, you know, I maybe do that say three or four times a year as well as reporting at various meetings and things but just the kind of recollection of key things that I don't want them to forget or key people who are now available and I want to see them. So, that I think is quite important in keeping people informed and up to date. Who is he? What are they doing? Why are they doing it? Where can they be contacted? You know, they want to collaborate, get in touch, things like that.

**94:**

**95: QB.20-How effective is communication within the Centre and how does this occur?**

**96:** NOT ASKED IN THE LIGHT OF ANSWER Q19

**97:**

**98: THEME C) ORGANISATIONAL DEVELOPMENT-Resources**

**99: QC.21-Looking at the Centre's resources, what do you feel are the major assets within the Centre?**

**100:** Well, the human resource. The people are the most important thing. If we were suddenly transplanted to a tent on a desert island, well fine, you know we'd still be able to do something because it is the people and their ideas and um, their creativity and their commitment and enthusiasm etc. so that is the key to it I think. Human resource. We just happened to move to this accommodation which in many ways is better because you have got different types of space for different purposes which is good but you know we have filled it and we're cramped and we've only been here six months so I have got to say having a reasonably good physical resource accommodation, different types of accommodation is good, could be better but I mean at least we're not all in one space and it is open plan - we'd drive each other mental. We can have a private conversation, we can look at a video and can project slides and we can go to the office and we can go to the studio. We can go and sit on the lawn. So you know, that's better but we can still use this space but I'm not happy with how it is right now. We have got to kind of reorganise it soon.

**101:**

**102: QC.22a-Does the Centre have any substantial income generating activities and if so how did this come about?**

**103:** Well it depends how you define substantial. I mean, you know, four or five years ago we had no income, external income generation capability and largely because you know, we perhaps were only just beginning to organise properly, you know gain credibility. Now I think we are at a different stage now where, you know, there are completed projects, you know, there is output. We have gained credibility and you know, confidence and credibility. So, I would like to think that we're in a much better position now to generate external income and have done, I mean the figures are much much better and getting better but I am convinced that you know, if and when we do get a Arts & Humanities Research Council that we will be able to compete very well for any funding in our sector, you know we have been shooting in the wrong goal posts, we have been applying to the ESRC and it is just not the right kind of thing. We have had some success but I mean to be really doing that we have got to have the right context. We have got to have the right pot to be bidding into but I am convinced that we can make an impact and increase funding from Research Council sources as well as external sources because you know, we have been trying to develop that now for a very long time.

**104:**

**105: QC.22b-Are there any areas that are a substantial drain on the Centre's resources and if so what effect does this have?**

**106:** Well, the budget is operated as a School budget so obviously the Research Centre is a part of that and probably takes up half that budget which in not insubstantial and I'd like to think there is value for that investment and I would hate to think that there was any money leaking away. I have got to account for everything that we spend, an analysis of where it has gone, where and why. You know the accountability for it is very clear. I mean obviously we are all interested in some way in new technology so that in itself to be ahead, that is a substantial investment but I think a good one to make. So I wouldn't like to think that there are any kind of drains on resources. You know, I think that is a kind of negative way of looking at it. It is an investment of resources where up to now I think most things have sort of paid back or will do. These things are long term investments as well, especially people investments.

**107:**

**108: QC.23-Is the Centre able to use other resources than its own and how does it go about securing access to these?**

**109:** Well, through a number of the projects that are going on, you know these are collaborative projects and so you know, people would be naturally using other resources, especially very specific resources like printmaking workshop or the National sculpture workshop or you know, working with other Institutions, different Universities, or perhaps public bodies, so you know that is all to the good I think. The more you know I think we can connect with external collaborators, the better I think. Not just with funding but you know with the professional connectiveness of research. I think it should be feeding in to the professional and the development of the disciplines.

**110:**

**111: QC.24-Apart from the staff, who do you see as having a vested interest in the success of the Centre and why?**

**112:** Well, I think the University do otherwise I don't think they would have let us have our own way so much. I think especially now that they do see that we have some good ideas and they can use those too, you know. There is a misconception about Art and Design, you know you think you've got to really really prove that you are doing something worthwhile but I am pleased to say that things can be noticed and used and we are contributing to the University's strategy of research. I think the stakeholders should largely come from, they certainly

come from the local and regional context, you know, through various projects we now have people in from public bodies and various sort of organisations who you know, actually work here and connect, have specific roles in some cases in certain projects rather than being kind of interested observers. But I mean there is a long way to go on that. It is a credibility building thing all the time. You know the commercialisation of what we do is not terribly well developed if at all but that is an issue for the University, that is a kind of, you know, there is a kind of strategic thing now that needs to be worked out. We can't just suddenly do it ourselves but I am aware that there is a lot of development in that area needed and a lot of hard work because I think we do come up with some interesting products here and processes and methodologies and they do need marketing. You know, you can do a limited amount yourself but in a way until somebody like Shell adopts a more sustainable design methodology in their packaging then you know, we could be shouting about that all day but if somebody does it, then BP might be interested and then ...

**113:**

### 114: THEME C) ORGANISATIONAL DEVELOPMENT-Networks

### 115: QC.25-Moving on to the Centre's contacts, does the Centre have representation on influential national or international research bodies and how has this been achieved?

**116:** Um, yea, yea. I think we have actually set up a number of initiatives, one to do with a network, the network and this is really about developing research training and resources so we kind of instigated that and are developing a web site and you know, we have got a number of twenty other Institutions working with us on that. Things that already exist - representation tends to be at Assistant Principal level. For instance, Bob Putney, who is the Dean of Faculty, is on a number of kind of you know, important public and educational bodies. He attends NESTA things, RAE subgroup things and he's all over the place so he does a very good job at connecting us at that level and then we do, in order to follow up that, then we would actually be responding to like consultation documents or whatever. Taking advantage of making presentations at conferences supported by CHEAD or whatever. So, yea, I mean I think we probably are more sort of better at the kind of active input than say the organisational, strategic thing. But again, we could be better connected. You know, it is partly geographic actually. It's like if you live on the coast you're kind of on the edge and there is quite an interesting thesis about people on the edge, you know, how central can they be, you know what I mean? I mean I think that's the kind of speculative thing, but I certainly encourage everybody to be involved in all the key Art and Design bodies and conferences. We spend more money than probably, you know, anybody travelling to places, you know, because it so important that you are there and you're seen. People won't come here so you know you have got to go to these things. You have got to have web site presence, you have got to keep bombarding people with literature and papers and invitations to exhibitions. We spend a lot of money actually promoting what goes on. I think you have got to do that. We are not in the middle of London, you know. It is very very important that you actually kind of constantly saying "we're here and we're doing something useful".

**117:**

### 118: QB.26-Does any of this provide industrial representation?

**119:** NOT ASKED IN LIGHT OF THE ANSWER TO QUESTION QC.25

**120:**

### 121: QB.27a-Has the Centre developed any partnerships or collaborative projects and on what basis are these arrangements normally made?

**122:** NOT ASKED IN LIGHT OF THE ANSWER TO QUESTION QC.25

**123:**

### 124: QB.27b-To what extent is the Centre dependant on the (host University) and in what way does this impact on the Centre's work?

**125:** Um, the Centre is really dependent on the level of funding which is set by the School, its largely RAE funding so you know in a way how we've generated money is by promoting practice, practice based research, etc. etc. so in that sense the University has had almost nothing to do with that in a kind of subject sense and in fact you know, I remember in 1992 when we put in the RAE collations, somebody said to me "don't bother" - OK? - and I was so annoyed at this of course I bothered and it was quite a good job I did so you know, I think at that point the University thought that how could artists and designers do research, you know, it's not on but since obviously their view has been very much changed and that's good, as I was saying we can contribute quite a lot to the research strategy of the University and you know, I think a lot of, I personally, have been involved in things like the research committee, like the research degrees committee and I have learnt a lot from the University as a whole, if you like, colleagues in different areas that is fed into a research strategy so you know, there have has been a lot to that.

**126:**

**127: QB.28a-Does the Centre benefit from links and contacts from within the (host University) as a whole?**

**128:** Oh yes. Definitely. We have got people who come here and come and talk about research. The nurses for instance are interested, can identify with practice-based research and they were here a few weeks ago asking how we're organised here. A lot of the question that you are asking - how do we operate and what do you think we should do about a web site, you know...

**129:** We have had a lot of people visiting and saying "how are you operating?" - so yea, it is nice to be able to help people so that they don't reinvent the wheel. For God's sake don't do this, do that. So, you know, colleagues in the University I think are, they're intrigued, they see us as a bit of an oddity but you know, a kind of interesting, obviously productive oddity and I think increasingly there is a lot of interaction across the whole of the University, not just in areas where you think there would be an obvious kind of relationship so that's nice and it is nice to get their views as well.

**130:**

**131: QB.28b-Would you describe the Centre's relationship with (host University) as: a) active and mutually beneficial, b) sometimes at odds but usually supportive, or c) difficult and sometimes strained?**

**132:** Um, a) now but c) ten years ago. We have gone from c) ten years ago to b) five years ago to a) like OK. It is the drip on the storm, you have just got to be there saying sensible things, representing your colleagues and just kind of doing things convincingly without people saying "oh yea right".

**133:**

**134: THEME C) ORGANISATIONAL DEVELOPMENT- Market responsiveness**

**135: QC.29-How do you market the Centre?**

**136:** Well again, I think this is an area where we could have been much more organised. I think we're better at it. We have just redesigned the web pages and they'll be up and running in April and I think that is increasingly important with visibility and inter-activity and people do - you know we get e.mails from people so it is working. The other thing we do is if we fund something, partly fund it, we always make sure that you know, that we're acknowledged. This is largely to do with design publication, research publications so there is a kind of presence. If anybody goes to, if they're invited to teach somewhere else or go and visit and make a presentation, we always take a portfolio with publications, information, about who's here and things like that. We're actually thinking ... three years ago we did make a little fold-out leaflet with who is here, what we're doing and that was quite useful. It is redundant now in a way so we're thinking maybe of producing another sort of paper-based thing which is you know, nice for people to sort of pin up on the wall, put in their pocket or something. So, I think things like that help but actually again people are the greatest ambassadors and evangelists you know and I would expect anybody who leaves here and goes out to do something is going to be an ambassador for the Centre.

**137:**

**138: QC.30a-How would you describe the image of the Centre?**

**139:** Well I don't know. Don't ask me that. I would desperately hope that it is seen as somewhere perhaps small and interesting but doing work of significant quality. It is only a little set-up and it is only a little School you know, we've only got about 400 students. Compared with a lot of Schools it is minuscule but it is nothing to do with volume it is to do with quality and enthusiasm and people with commitment so I hope we do that. We're never going to be seen as the Royal College or somewhere like that but that's not really what it is about. It is about a little dynamic catalytic organisation.

**140:**

**141: QC.30b-How do you feel this image is perceived by the outside world?**

**142:** NOT ASKED IN LIGHT OF THE ANSWER TO QUESTION QC.30a

**143:**

**144: QC.30c-Do you think the image of the Centre has changed since you first started work in the Centre?**

**145:** Oh yea, I think we started off in a kind of ragged way. There were only about three of us so a critical mass was about nil and I think as people have come and gone and added to it and, you know, it has become quite an interesting set-up I think. You know, we do get a lot of interest. We get a lot of e.mails "can we come and visit?" you know and that's great, people do trek all the way up to Drury. So yea, I think the, well I mean, the whole thing actually has changed and I hope that, you know, it has grown into something more coherent rather than straggly more compact in a more conceptual sense, with you know, as you go on, more focused aims, more validated mechanisms, you know, and hopefully a kind of self critical awareness.

**146:**

### 147: QC.31a-Who are the Centre's key clients and could you explain their importance to the Centre?

**148:** Well, I mean I have got to say going back to the aim of being an enabler or facilitator or you know, engine driver, then hopefully all the teaching staff in school, active researchers are you know, not necessarily clients but people who we work closely with and who hopefully benefit from what goes on here and peoples' help and advice and feedback, so those I think are our kind of closest user group, if you want to see anything like that and also the various people in the University who are kind of asked for comments on this, that and the other and advice in a strategic sense and operational sense. You know, "how are you doing this". So we've got kind of users or recipients of some of the experience in the University but increasingly you know, it is nice to see external people come in like yourself or other colleagues and commercial and industrial people. I've got a guy coming to see me in a couple of weeks, I think he's from Drury Technology Park and they are interested in aspects of opening distance learning which we are actually pioneering here you know, through a new course and I am actually pushing the University where it has never been before. We're trying to quickly get together virtual campus and things that support on-line learners so, you know, I think increasingly we are looking at markets and clients and attracting new kinds of students, new collaborators.

**149:**

### 150: QC.31b-How does the Centre manage its relationship with them?

**151:** Well, again I could probably be much better at it, I mean I think it is a reasonably recent development, as I say I think it is a consequence of credibility and um, you know, convincing people that you know, what you are doing is useful and could help them in some way but for instance, we have got a seminar organised in June which invites SME's from the region here to talk about new technologies, new media can impact on their business, so it is through seminars, through going out there and visiting them.

**152:**

### 153: QC.32a-How effectively do you think the Centre identifies the needs of its clients?

**154:** NOT ASKED IN LIGHT OF THE ANSWER TO QUESTION QC.31b

**155:**

### 156: QB.32b-Has this led to the development of any new products or research contracts?

**157:** I think, you can see where it could lead. If you really wanted to kind of take it that stage further you could see that you could have a product innovation area, you know. But again, when I think of that, that is like a full cost independent arm and really that shouldn't be located in one school because it should be interdisciplinary and it should be university innovation centre.

**158:**

### 159: QB.32c-Do you employ any methods to monitor the quality of work going out of the Centre?

**160:** Right, what we would normally do if somebody was going to conference, which quite a few people are in a couple of weeks, and if they were presenting, which they all are, we would do a mock run-through the presentation. We have done that for years actually, it is one of the first things we decided to do. It doesn't matter who it is, if I am going then I'm put through the mill as well. You know, just a couple of people, whoever is available in a lunch hour or something and people run through their work and somebody checks the timing, eye contact you know, volume, speech, you know and somebody kind of looks at the whole organisational thing so that theres a dry run and then feedback and amendment and hopefully when they go out they can do a very good presentation. I think we do, in general. We have had feedback on that, that most of the presentations are very professional.

**161:**

### 162: THEME D) SECTORAL ISSUES-Market Capacity

### 163: QD.33a-Moving on to the last section, I would like to look at the specific market environment in which the Centre operates. Are there any legal or regulatory issues which the Centre has to operate within, especially being part of a university?

**164:** Yea, well again, I think it is a difficult area. The University has an organisation called Link which has had a kind of chequered history but I mean the aim of that organisation is to promote industrial commercial business links, not necessarily just for research but you know, across the whole spectrum of the University's activities and um, that is under revision at the moment. We have had a couple unsatisfactory dealings with them in terms of what service they provide for the return, you know if we earn something then they take a cut. Hopefully, you don't mind paying that for good service but the quality is a bit dubious. Better not say anything there. But yea, you know there are things that the University has. Good quality control systems and is trying to prove them. Tortuous but still rigorous, so you know,

I suppose in everything we do we kind of we have got that kind of framework which is good, I'm not saying that it is always kind of easy to marry with but I think it is pretty rigorous. I do work for other places sometimes and I do wonder about their quality control systems for research.

**165:**

### 166: QD.34a-How would you describe the market in which the Centre operates within?

**167:** I don't know. I don't like sort of market really you know. I prefer professional context and as I say, in the professional context we have got a lot to offer and learn from others but really the bottom line is I think we do usually produce some interesting ideas, some interesting products, some useful methodologies and mechanisms and you know, I think a lot of people have benefited from them. We get invited all over the place to talk about what we are doing and in Europe as well because I think in Europe there is still a lot of confusion about constitutes postgraduate study and you know, a lot of places think that MA level is research and I have spent quite a lot of time in Finland and France and Holland and you know various other places trying to talk about criteria for rewards and research structures and you know, I think that hopefully has been very useful in a very broad sense, in terms of postgraduate education. But you know, there are products from this centre, you know not least art works, design works, catalogues, research papers, conference presentations, commissions, work, collaborative work you know with external collaborators. There are products, I'd always like to see a product and I think a methodology or a strategy as a product, so yea, I think we've got a lot of interesting products that can now be validated and credible and the next step really is 'how do actually market that or commercialise it?' you have got to be pragmatic in 'what can we get from this now?'

**168:**

### 169: QD.34b-What would you say is the existing and potential demand for the Centre's products and services within this market?

**170:** NOT ASKED IN THE LIGHT OF ANSWER Q34a

**171:**

### 172: QD.35a -Who have been your key competitors as the Centre has developed?

**173:** Well, I could say something very simple like all the people in the RAE got 4's and 5's. You know, they're obviously larger and perhaps more experienced and better organised, or lucky. By you know, I want to improve I'm just concerned with quality. That's the bottom line and people have their own definitions of it but um, you know you could say we don't have any competitors because what we're doing is you know, good research, proper research. You know, reflective practice.

**174:**

### 175: QD.35b-How have they affected the Centre's growth?

**176:** Yea, growth probably. You know, obviously as a consequence of having funding from the RAE we have been able to employ certain people in key positions so yea, that has affected it obviously. Also you know, I would like to think we have invested the money wisely and there are quality products being developed or are in development and there are people who we work with who have been terribly helpful in all sorts of ways, supporting projects, partly supervising, you know giving us advice on lots of different issues so competitors, I don't mean they're like that, I think they are professional peers and we might be in competition and you might not like some of the ways they operate but if you don't you just ignore.

**177:**

### 178: QD.36-Have you experienced problems of recruiting or retaining staff due to competition?

**179:** No. We have problems getting rid of people. I mean the nice thing is, once people can get their teeth into a role, it's like they develop it and usually very well and I can only think of really one instance where I have had to terminate somebody's contract. I think everybody else has developed their own roles. That's great, that's a creative thing, part of the construction of the whole thing and perhaps developed in ways that you would never personally seen, so that's nice. I would prefer to head hunt. I have tried all things, I've tried advertising widely in this that and the other and um, you know, sometimes it gives you an interesting clue but by and large you know, especially early on I did head hunt people, definitely, and waited eighteen months for someone in particular and made sure that I did get them and keep them and promoted them.

**180:**

**181: THEME D) SECTORAL ISSUES- Macro-economic growth**

**182: QD.37-Now looking more broadly at issues that affect the Centre, is the Centre affected by the state of the economy and in what respects?**

**183:** Um, yea, well obviously you cannot be immune to it. Perhaps in a number of ways, you know, as I said research is a career option, it is exciting in one sense but you know, it is not really going to set you up in Barbados so you know, I think people enter research for really very kind intrinsic reasons and it is not about money but the employment value you know that does affect the employment market especially for research students who get a pittance of a salary and you know we have got one particular project we were trying to recruit for a whole year and we held three sets of interviews and basically you know, the skills that we required, we weren't paying for them and that's simply because of the existing salary scales and you know, especially for something like research studentships where you do get some external funding sometimes but you know, it is not substantial so you can't offer someone an amazing package and that does affect recruitment. Not so much with Research Assistants or Fellows because the salaries, OK so they're not terribly good, but it is a little bit better, there's career progression albeit in a limited way. I think the other affect of the economy is really availability of potential external funding from the industries. People say, "Oh Drury it is awash with money because of the industry" but it's not, you know, it might have been about fifteen years ago but now, to get £15,000 out of a regional mulinational is a major coup and it is more difficult that you would assume to actually get people to invest and we're not looking for substantial sums but they're edgy about it and it's to do with credibility and once they know you can do the work then they're fine. Hopefully I think that will become easier but so there is an economic brake on what you can do especially with sort of applied research.

**184:**

**185: QD.38-Has the Centre been affected by changes in society generally and in what respects?**

**186:** Um, I think we have got quite an interest in a mix of people. Now again, the bottom line to me is you know, are they quality people first and foremost. I don't care whether they're male or female, black or white or pink with green spots. If they do the work, fine, but I think research does attract slightly interesting kind of people. I think they are people who prefer to take risks. Not only are they artists and designers which is madness anyway but they are actually going into research which you don't know what you're doing until you do it and when you've done it you know, you're not quite sure what you've done so, you know, there's a whole kind of ambiguity and uncertainty but you know, I think that is the state of things.

**187:**

**188: QD.39-Is the Centre affected by industrial change generally?**

**189:** NOT ASKED IN THE LIGHT OF ANSWER Q37

**190:**

**191: QD.40-Are there any consequences of government strategy that affecting the Centre?**

**192:** Well in a kind of positive way, especially if you think there might be in the country eventually an Arts & Humanities Research Council. Now that has got to be good news and we have been waiting for it. Well we've had to earn it you know for the last twenty years and you know, that's how long it has taken really and why should anybody give you any money if you're not seen to be a credible profession research. So, yea, I am positive about that, I think it is a good move and it is going to be competitive and that's good because you know, we have got the skills and expertise to be competitive and to gain funding and to contribute to policy. There is a consultation process going on just now about AHRC and you know we are going to be part of that and making comments about policy so you know, I am quite optimistic about that. There are other areas where you would be less optimistic, like what is happening with the Arts Councils because they don't appear to know that research exists or they don't have any policies about funding researchers. I think that is in a whole mess. Very paltry sums but the other side of that is that there is lottery funding and there is new directions and you can participate in that so that is positive as well.

**193:** CLOSE

**194:** *Many thanks for sparing the time to help me in this study. I wonder also whether you would mind me contacting you again further if I needed further information although it may not be necessary. Once again thank you for your help in support of this project.*

# Appendix D: Example ‘semi-structured’ interview – Senior Researcher, Case D

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**Project:** Ph.D Thesis **User:** Seymour Roworth-Stokes **Date:** 15/09/2002 - 09:28:14

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**1:** **CaseDSIMS**

**2:** **Researcher Interview with: Dr Mike Stone**

**3:** **Date: 17/3/99**

**4:** **Held at: The Art & Design Research Centre**

**5:** **University/College: Bainbridge University**

**6:**

**7:** ***QI.1. INTRODUCTION- This interview has been arranged as a part of my research study concerning the development of Art and Design Research Centre's in UK Higher Education. Your Director suggested that I speak with you as you are in a unique position to describe the Centre – in respect of its current form but also from the perspective of someone who has worked in the Centre for (x years). Please note however that this discussion is totally confidential and all references to people and recognisable locations or situations will be codified for purposes of analysis. You can also be sent a copy of the transcript if you prefer. I have a very open question to get the ball rolling. Could you just spend a few minutes describing the history of the Centre from its beginnings in (x Year) through to the present day?***

**8:**

**9:** 'Well, I think I have to go back a little bit because I came to Drury in 1990 and started my Ph.D research here in the Art School and after about eighteen months or so, the Ph.D was an unusual one in many ways. One of its peculiarities was that it was an inter-faculty project, it had a kind of scientific side to it as well a kind of practice in ceramics side to it and at the time there wasn't anyone who could act as Director of Studies within the school. My Director of Studies was a Scientist from the Science School. Anyway after about eighteen months or so I moved to this Science School to finish my Ph.D there so I kind of lost touch with the Art School a bit, you know for about two years until I finished and then through that time Paul was working away but I didn't know Paul at the time. He was in the Sculpture Department and he was supervising Steve Jones who started just before me as a Research Student. So when I started there was Steve and myself, there was another girl Jo Upton who dropped out after a while and that was the only kind of research that was going on really that I knew about. There was virtually no research on the staff side, in the formal sense that people do things and that was also kind of pre-research assessment exercise. We hadn't received any funding then. About, I think it was 1993, the Principal got some money from various big local companies to kind of boost research in the University. He set up this fund and there was money going for research fellows. I think there were six research fellows in the University and one of which came the Arts School, another one was in another School of. For example another one was in the School of Architecture and I thought that looked interesting and I'd apply for that so I did, late, and was given the post but nobody actually knew what a Research Fellow did exactly. They wanted someone to help develop a new course for design but hadn't got an idea what role a Research Fellow would have so I was given an office of my own and after a little while, and at the same time I think Paul was made a Reader and took on this role of co-ordinating the research in the School and shortly after that we had the first RAE exercise and didn't understand what was going to happen there but we actually did quite well because you know a lot of folk pulled together and it turned out that we'd actually done quite well. I forget what we got in the School but we got money which nobody had ever had before, you know, so that allowed us to do it I mean at that time there was just Paul was doing the organising. he got another part-time member of staff Brad Phillips involved who had really retired but you know, so Brad was made an Honorary Senior Fellow for this

purpose. He is really a Graphic Designer but he is a very clever man, there was Brad and Paul and myself on the research side and we moved into an office together and there was also a couple of research students just about to start, George Buxton at the time, we had one Studentship which we gave to George Buxton, there was four of us. Jack Singh was half way through so that was it. That was our Research Centre so we just shared and office and that was it and I said "well we must call it something - the Centre", we called it the Research Unit and then I went away to Rushton for a conference or something and everybody said "we called it a unit but then we changed it to centre because everybody took it more seriously" so I came back and said "right, we've got to change the name" so we did and I think we also, shortly after that we decided that we'd have a conference because what we were talking about was establishing a more, you know we were all being dissatisfied with the way we were being made to work. Paul, myself in particular and kind of felt quite dissatisfied with the methodology which I'd had to adopt in order to get my Ph.D and I thought there must be a better way of doing this so we were all reading books like Donald Shea and things like that and thought what we are really trying to do here is establish a practice based research approach which is relevant to practitioners and is also is the results of allowing to be of use to other practitioners in the field. You know, we don't want anymore pseudo-scientific things coming out which really work they usually fail miserably because they are way over the head of the people they are designed to help and they are not a true science, they really ought to change. I think my Ph.D was a classic example in that really, so the determination not to try and make the same mistakes again I think. What did we have at that point, well the Conference allowed us to expand a bit more. That was 1994 and we employed a couple of research assistants to help us with that and at that time we were expanding our interests in multimedia. The idea of multimedia from our point of view, we thought it would be an ideal medium for documenting research in Art and Design, you know use that technology and that was the basis of what George Buxton was supposed to be looking at, whether multimedia could be used as a documentation tool for Art and Design research so there was quite a lot of enthusiasm for the idea of using CDs and things like that we said "the First Conference that proceedings would have to be on CD" and had no idea what was involved in doing that and that was a huge job. It took I think over at least eighteen months to complete that task and now we know what is involved it would have been relatively straight forward but you know not then. How are you going to get over problems like that? How do you make a cross-platform document and things like? Using Acrobat 3 in the end but Acrobat 3 didn't exist when we started so you know I think naivete has been a help to us in lots of ways because we have gone into things with no idea of the sheer scale of what we were getting into. We've developed more experience, we've tried to improve the supervisory experience we've got as well so I mean the research centre started off with no particular mission in mind really just the idea that we were going to pool our resources but it soon, I think, it has become an important thing and it is interesting that, I suppose you know it's role has developed along with role of the people in it. It has been important, for example, that the staff see it as a way of getting support for what they want to do and that is perhaps one of the dangers of it that it can be seen as a separate entity so we have tried to take steps to get over that problem and the way we are trying to do that is to link individuals with different departments. You know they don't work there all the time but they will teach on some of the courses and things like that, they will be part of the course panel and that sort of thing. So we have had, I think about two years after we started, we had money for another research fellow and I think they interviewed Rachel Brown and Philipa Humley and couldn't make up their mind and Paul said "Oh what shall we do - if we jiggle the books a bit we could get them both" so we did and they both stayed with us for two years and then Philipa left and Rachel has carried on ever since. Rachel is a Senior Fellow like myself and has done a fair amount of supervision and I think about two years ago we decided to start work on a new course called a Research Masters Course and the idea behind that was that we - myself, Rachel and Paul - were increasingly being asked to supervise externally and also a lot of people were coming to us for advice and we thought "well this is becoming a bit crazy really, we need to try, we're giving away an awful lot here and we really ought to try and formalise it and then we can make it work for us so that is where we started from but in the end we hadn't any idea of what we were getting into there I don't think, not to begin with, I think we thought it would be a series of workshops or something fairly manageable and actually it has grown in an incredible way. We did a couple of surveys. What people wanted essentially distance learning they liked the idea of the course, they like the idea of the curriculum but they weren't prepared to come to Drury. They would like it if it was distance learning, from a distance, part time so they weren't prepared to given up everything. Anyway the kind of rationale for that was developed of course and what we, at the same time the kind of curriculum was developed in terms of what we feel the course would do so it was a change from simply being about you know a research training course to much more of a kind of professional development course and so once we'd decided to take a decision that it would have to be network distance learning that then gets you into another realm of technology. We came up against a pretty severe snag really, several snags. One was that there was no such course on our books anyway so we had to establish the idea of a New course to begin with which took time. Then there was a lot of problems with people in the University seeing us develop this course through a research centre. Courses are traditionally developed by academics for you know disciplines so there were problems with that. The problems with how it was actually going to be funded, costed, the development of it and so on and who was going to run the course and deliver it and then the major snag was that we realised that in order to do this we needed an infrastructure that didn't exist in the

university. That was going to be a snag so I think essentially everything was put on hold for about a year and in that year well we had a new Principal, who came from Jackson, and the Principal was very very keen on distance learning and establishing a virtual campus as part of our GU and found money to back that idea so an open and distance learning centre has been established at the campus, and they are just in the process of just putting together a virtual campus now and what they have decided to do is start off with four or five pilot courses around the University to get that off the ground and the ball is within the Faculty of Design is in the most advanced state of readiness so luckily for us they have decided that we are going to be one of the main elements. So that is great because we are getting help to develop it and the main thing is in the way it has been delivered, the development and the infrastructure for that. So that is something that has occupied quite a lot of my time and will do increasingly now and is the reason why we have Paula as research assistant. He has been looking at the technology we require and resourcing things on the internet etc. So he is very important for that development. While this was kind of in limbo, I think the decision that you know that he wasn't going to wait for it to happen, he was far more interested in practice and particularly set up a group with colleagues called Forum. It was at a time when various groups were trying to form within the School and we decided that a better way of kind of funding the research was to try and form the later groups, the idea behind it was to present a more coherent picture to the world of what we were about. Selling individuals we decided wasn't a good idea but if we could sell, not sell exactly, but promote the idea of a group - a bit like Sustainable Design if you like but you can then give it the presence on the Internet, you could promote it through literature and so on and it made a lot of sense to do that and so about three groups I think were formed. There was the Design Forum, one for 3D Design and a CAD CAM group. The 3D Design group was reasonably successful, it had an exhibition at a major gallery - top artists showed there - I think that worked very well. The Design Forum worked very well. Had several exhibitions so far and associated publications and the next one is taking part at the Milan furniture fair so that has been I think a very successful way of working but how successful, we'll have to see.'

**10:**

## 11: THEME A) LEADERSHIP-Entrepreneurial/ intrepreneurial personalities

## 12: QA.1- How do new initiatives or ideas get developed within the Centre?

**13:** 'Usually one of us will have something that they are really keen on developing, some idea or interest and they'll try and promote that. I think Paul is certainly the lynchpin of the Centre and is particularly open-minded and will listen to what people wish to do. If people are working and there is a clear output of what they say they are going to do, and also I think, a lot of the themes that have emerged such as a desire to work in a environmentally friendly way and that sort of thing and to work with the local community, if those things are consistent with what people want to do, people kind of have an idea of what the underlying philosophy is although I don't how well it has been stated or is in documents and things but as long of people are kind of aware of that and usually they'll seek out the people they're interested in working with and something will emerge. Then it becomes, you can only call it an initiative when it starts being funded. Paul isn't the principle budget-holder anymore but he is ostensibly in overall control for the research centre so he'll decide, I think, whether to back it or not but he usually seeks advice from others. I think some things have been difficult for Paul in that he is part of the initiative as well so it is a bit tricky because he wants to be seen as independent in that sense so maybe that is something you'll have to ask Paul about.'

**14:**

## 15: QA.2a-What would you say are the objectives of the Centre?

**16:** 'Well, they are changing all the time, this is the thing. I think the main objective is to create a resource which allows various groups of people to interact, it provides a kind of technical support, the infrastructure that people need. It should be there to help the academic staff with what they do as well so if they are interested in doing a Ph.D they'll come to us and they'll get supervisory help, they'll get technical support. If they want to get a project off the ground, several of them may want to work together and they will then work together with people within the Research Centre so that is quite a common thing so that is another way in which we might help. If a Lecturer, for example, is interested in technology then they can come to us and get specialist help so that I think is the role, the main role is kind of supporting infrastructure. It hasn't got, we don't to seek to promote the Art and Design Research Centre as a separate entity for the Art School, I think although it sometimes comes across that way but it is meant to be a department within the School of Art. This is a tricky one because it is all about a kind of marketing really and how you present what you do to the rest of the world and I think we took a decision a little while ago that in order to do that coherently we needed a strategy in particular, so that people could see the structure of the research centre quite clearly and that is transparent to people but if you look at the Website, what you will see, well the latest version is still to be up and running. It is just being revised and as soon as it is approved it will go live but that talks in terms of groups now, so it will have like the Art and Design Group and whatever and individuals are in under those groups but as I say it is to try and give other people who are interested in the sort of research that is going on and transparency of access.'

**17:**

**18:** **QA.2b- How were those objectives were derived?**

**19:** 'Well that particular objective is all about how to work, you know everybody in the School, a large majority of the people in the School have been attributed to the success in terms of the RAE exercise, so in a sense it is a democratic idea that it is a way of administering that money that has come from that exercise in a way that everybody feels that they can get some reward. Other folk have taken a completely different view and said "Well what we are going to do is just to put all the money into just a few people and that's it" but well, you know, I think a lot of people would have objected strongly to that and it is a difficult balance because you want to encourage people, you know that if you really want to get this kind of interest or reputation and probably is going to depend on a few people that are working at that level so you have got quite a lot of people working who have been doing good work for a long time but it is pretty localised really. So one of our kind of efforts is to try and change that to give people the necessary support to go from local to the larger - national. A lot of the strategy of the Research Centre is a result of trying to do well and make a success of the exercise, that really is what it comes down to. What we are also trying to do is, over the last few years, become less dependent on the research exercise but I think we're going to be dependent for some time on that because it, I mean, it is really what is funding the Research Centre and the money we get other than that is comparatively a fairly small proportion.'

**20:**

**21:** **QA.3a-In your experience would you describe (name of the Centre's leader/s) as someone who: a) is always coming up with new ways of doing things, b) puts things forward after careful consideration, or c) likes to keep things pretty much as they are?**

**22:** 'Well, this place has evolved a lot. I wouldn't go with c) at all. I think Paul, he does put things forward but he is a very good listener and is prepared to take on board your ideas very well I think. I see one of my jobs is to come up with new ways of looking at things and we all pride ourselves on the ability to, if you like, think the unthinkable. We think as designers it is our job to turn things on its head and re-think things regularly so we try not to you know, every time we come up with an idea or something, we do try and push the boundaries a bit and Paul, I think, is very good at accepting and shifting his thinking. People would find that difficult. A lot of people are uncomfortable with change but Paul, I think, is one of the few people I have met who is actually very good at dealing with it. I mean we have moved in the last year and virtually every year since we started the Research Centre we have moved office and we expanded and changed shape regularly. Every time we just get one structure right we move to another one and if we worried a lot about that, we'd never get anywhere so I think the ability to accept change and accept ideas from others is absolutely essential.'

**23:**

**24:** **QA.3b-When new ideas are put forward by other people would you describe (name of the Centre's leader/s) normal response to be: a) lets test the water and see what happens, b) lets way up all the options before doing anything, or c) lets stick to what we know well?**

**25:** 'Well I think I would say a).'

**26:** [Interviewer did not probe further in light of previous answer]

**27:**

**28:** **QA.4a. On a day to day basis, would you describe (name of the Centre's leader/s) involvement in the Centre's work to be: a) hands on, closely involved with ensuring work is accomplished, b) hands off but aware of what everybody is doing, or c) remote at times with limited awareness of what's really happening?**

**29:** 'Definitely a).

**30:** 'I mean if it wasn't for Paul half of the projects in this department wouldn't get off the ground and they certainly wouldn't be completed. I think Paul is an essential quality control thing. I mean there is a great deal of pressure to try and get things out of the door. It is absolutely essential that nothing leaves unless it is of the highest standard and we all check each others work and Paul is very good at that, he is excellent.'

**31:**

**32:** **QA.4b-Obviously mistakes occur in such a busy environment as a research Centre. 'When they do happen how does (name of the Centre's leader/s) normally react?**

**33:** 'Well, they do happen occasionally, but what happens we look at the circumstances and try and understand, he is always supportive, there is no question about that really, it is difficult. We would certainly try and do our best to put things right but the main thing is that we have to support each other and understand that we are actually working under quite a bit of pressure so obviously things do happen but it depends largely upon whether people are continuously negligent. I think if people make a genuine mistake.'

**34:**

## 35: QA.4c-How does (name of the Centre's leader/s) react if projects are not competed on time?

**36:** 'Well, it depends on the project but you know, in some cases Paul has through sheer force of personality, made sure that it works. I mean the Ph.D students for example, I mean he has supervised several now and I think without his help and personality they wouldn't dream of not finishing. I think that is a kind of attitude of mind that you set people. People have to realise but at the same time we have got projects that are not finished because we are not satisfied. We are not going to allow them to complete unless they are right. There does come a point where you have invested a lot of time and money and years of effort and we haven't pulled the plug on anything yet. We have changed, there was a time when we, for example, tried to, we thought we'd seen what would happen if we tried to produce a new electronic journal - we were going to do on CD and so on - this was before we'd done the First conference CD and realised what we were up against. So, we did this, we chose to call it a feasibility study and I think the result of the study was that we weren't going to do it. I don't ever remember formally coming to the decision that we weren't going to do it, it just petered out. Everybody realised that we were far too busy and I think we've learnt. I've actually learnt. I think there is a tendency to actually underestimate what we are trying to do, trying to do too many things and certainly in my own case that has been a real problem. I've tried to tackle too many projects at once. Partly the response to that is to get a lot more research assistants in the work on specific tasks and there was a time when our role could have included IT Manager, Web Manager, you name it, International Manager. We could have had all these roles wrapped into one and no wonder we didn't get anywhere, you know, in terms of our own research. It was very difficult. Paul is one of the few people, he is very organised, you have only got to look at his desk. I try and do what Paul does but I fail miserably. We both supervise the same students actually, not completely, we tend to do a lot more of the Fine Art students. We are both on the Research Degrees Committee, we are both each on the MA Course, we both have our own practice but Paul manages to get work out, as I don't. I have got stuff like virtual things on the computer that sort of go out but I've not actually made a piece for ages. I'm still struggling to do it. How he does it I don't know. The last piece he made I thought 'sod this' so I collaborated with the him and we were working up to the deadline but it's not yet completed.'

**37:**

## 38: THEME B) BUSINESS MANAGEMENT-Business strategy

## 39: QB.5a-Moving on to the future of the Centre, are you aware of any development plans beyond this year?

**40:** 'I think our thinking again, I think this is a mistake but it is in some sense inevitable is governed by the high cycle. I think our plans beyond this year are, now we've got the go ahead with the New course, I see the New course developing as very important. This is not me personally speaking, as an important initiative and kind of focus for a lot of work. I think at the same time the kind of art design thing, that model, is going to prove important for a lot of people because it does seem to be a very successful model. It is quite an expensive model actually but it, you know if you try and send work abroad and so on, it costs quite a lot of money but I think that has proven quite a useful model. We tried to make connections locally and also globally and is looking at some quite interesting areas. That particular one is looking at this crossover between functional objects and design objects and Fine Art. It is quite an interesting area for people to look at creatively so I think that type of model will continue but I think it will be, I see people coming together just to work on, perhaps two or three people working together, perhaps half a dozen people. There are quite a lot of product designers emerging and I think you might begin to see almost like a style in future. I can imagine people in the future getting a bit like the Bauhaus and others, a particular style effect, I think because of the interest in using new technology and CAD CAM and so on and try to push the boundaries, that would be very nice actually if people came together to develop a range of objects that exploited some of that technology so you could actually get products that reflected the research that was going on. I think that would be very interesting.'

**41:**

## 42: QB.6-How did these plans develop?

**43:** 'Well I think some of them are ongoing. You can't really say it depends on individuals wishing to take things. It is also developing a climate which fosters collaboration. That is very difficult because you are actually looking at a different model for a lot of artists and designers who have been trained to work as individuals. You know their training tells them that they have got to be independent that individuals have their own name on things and you have to be prepared to suppress some of that instinct when you are working collaboratively and that is difficult so I don't think it is going to happen overnight. I think people have to see the reward in it for them. It is very important that if you collaborate on a piece of work or something that the principle author if you like, makes sure that you are not forgotten and that you are acknowledged. You have to got a generosity of spirit and some people have it and some people don't and that is where the problems kind of lie. I think you can't force it, you can't tell people to collaborate if they are not willing to do it.'

**44:**

## 45: QB.7-Can you describe how these plans relate to that of the faculty and the University as a whole?

**46:** 'Well the University is just working on its new strategy for research in the University. The University, I think it has identified its main areas where it wants to concentrate on regional issues which are all things which are very important to the local community. The way we feel we fit into those is that in order, I mean the mission of the University is one of a kind of applied research, practice based research and if you want to applied research then you have got to have design in order to do that and so we, I think, see ourselves fitting in there as helping to make sure that a lot of the research that does come out of the university is applied. So that is probably where we come in. I mean it has been quite a struggle because persuading the rest of the University, or educating them into what design is about and what we do is quite difficult. They tend to thinks that all we do is make things look nice and it is superficial but we do collaborate on a number of kind of university bids because we actually have brought our Researchers we can do that so I think our reputation, if you like, is quite high in the University. In terms of RAE funding, we got by far the biggest share, a huge proportion compared with the rest, which I think made them take us seriously. Other Departments have done very badly so that has helped us a lot.'

**47:**

## 48: QB.8-Does the Centre receive any external guidance?

**49:** 'From outside the Faculty do you mean?

**50:** [Response-Inside and out]

**51:** 'Well we have various groups that may influence the way things go. It is constantly changing its size and remit but now at least it has got its remit written down. That consists of Paul as the Conveyor, myself who is meant to represent the Art School and Frank Clark who used to be the Head of School for Architecture but is now working on the Research side of things and Sid Todd who represents the School of Surveying so we all sit down every couple of months or so and discuss things like the Research Strategy. That is made up of a separate strategies for each School so Paul and I would work on the School's strategy and that would be kind of built on what went before and it is kind of the University strategy and then the Faculty sub-group try and take them all into account and form another strategy. If anybody ever reads these documents I don't know but the last document I saw for the University, I thought, well actually we're pretty close. It was very ambitious really but I think some of the underlying themes in there were pretty close to what we were doing anyway in that we've tried to, we've thought we must be less dependent on one source of income. We must get more external backing so we've brought in someone to help us with that - Helen Jennings. We are feel it is very important that research feeds back in some way to the undergraduate programmes. We try to link individuals with the course programmes and that sort of thing. I think that is the important thing so again that is reflected in the University's strategy and we also try do that. I don't think at the moment we have got a lot of external links with other Institutions but I think that tends to be done on a more individual basis, it would be like Rachel supervising or whatever. I think that is still important but we're not collaborating in a big way yet. We set up something the other day with other institutions called FAD which is a Forum for Art and Design which is going to be essentially a network for support for other Institutions interested in support for training.'

**52:**

## 53: THEME B) BUSINESS MANAGEMENT- Financial management

## 54: QB.9-I would now like to move on to the financial side. To start with can you tell me whether the Centre has financial targets and if so how are they set?

**55:** 'Well, I think what we have tried to do is be reasonably realistic. Exactly how targets were set, I don't know. I think Paul came up with the figure based on what he thought was possible, that is roughly about a quarter of the income that we are getting from RAE exercise and I think it will rather depend on how we develop that. I mean do you count things like teaching company schemes because that is an area that we are interested in developing as well. I think we have got about two and another one starting soon on the teaching company side. So that is quite an important one for the School. In terms of the Research Centre, as I say, bringing in Melanie to help with fund raising etc. I think what has been most successful is actually small amounts of money relatively speaking - two thousand, fifteen thousand something like that which for particular projects, rather than large sums of money. I have personally put in four or five bids and if they were all successful you are talking about two and a half million pounds so unfortunately none of them have been successful to date so I think the strategy for going for a large grant from the EC or whoever it happens to be, is not proved to be a good one. The reason for that, one is naivety, we are obviously not quite as naive as we were, the other is track record and the other is to do with credibility. It is very difficult, if a lot of research is funded by the EC or whatever is in traditional sciences or humanities etc. In the area of Art and Design there is no funding body for it so we are constantly having to kind of shift into other areas it doesn't really sit very comfortably in any of these things and until we get a new funding structure I think we are going to be still going for these small amounts but they do rack up you know, quite

rapidly.'

**56:**

### 57: QB.10-How are these finances then reviewed?

**58:** 'Well, they are reviewed, I think, Paul does try and keep a track of things. What has helped a lot is having a Secretary now, Helen. Before that we did get some help. We've got a most ludicrous system, I don't know where they got it from, the University must have bought it cheap, it is some sort of management information system but it is a terrible package to try and deal with. It counter-intuitive at every point. Sometimes you press return and its doesn't tell you if you are right or wrong and if you get it wrong you are back to square one. It is like playing Snakes and Ladders. I don't know anyone who can manage it so we rely on keeping our own spreadsheets that are parallel with system. Helen does a lot of that work so I think there will come a point when they have to streamline the system but that is a University decision. What we have to do is keep our own accounts to know where we are. You see the priority for us has been funding people as opposed to anything else so the vase majority of money we spend on people in terms of buying time and I think recently we decided to change the strategy slightly in that we used to buy in a lot of ad hoc lecturers to give people time. I think the plan will be to buy full time staff, a small group of staff that are dedicated to filling in for other staff and in a way to give proper consistency because at the moment it is very hit and miss really so it is fairer to the lecturers, fairer to the ad hoc folk and much fairer to the students as well. I think it will be a better system.'

**59:**

### 60: QB.11-At a project level, how would the Centre go about deriving a figure for a research contract?

**61:** 'Well, that is a tricky one because we have had experience in the past of doing more consultancy type research and my personal experiences of that have not been happy ones really. I don't think that we did it very well at all in terms of I don't think we costed ourselves properly at all. I think on the one occasion when I did cost a job, the client just said "We can't afford it" which is fine because I didn't want to do it anyway so I mean I don't actually think we should be doing that sort of research. I think you get into very tricky areas between when you know you get into consultancy as opposed to research and although we were encouraged very much to do that at the time, I personally think that is a mistake. That is my personal view not the University's view. I just think that I'd rather do research than give the research to somebody else and then it is complete to take to a development stage if that is what you want to do. I don't want to work as a consultant, when I have worked as a consultant it hasn't been a happy thing for me and the reason is because we are not dedicated to it, in the sense you know that our time is so split up with different tasks and it is impossible for a client to understand that. They think, well they are paying for a service. You say to them "Well yes, sorry but I've got teaching, I've got this, that and the other" but they're not interested in that and you know, if we didn't have all these things to do, if we only did one thing like Design Consultancy only do that then they can do a good service and it is fine but they are not researchers, they don't have to do any research and in their case it works, it is a good model. When we've tried it, I've tried it with various companies in the past, it has been a disaster quite frankly. It has lost us a lot of money. It certainly hasn't made us any money and it hasn't made us any friends and it certainly hasn't done us any good at all. So I'm not touching it with a barge pole.'

**62:**

### 63: QB.12-If this bid was successful, how would the project be monitored?

**64:** 'We do have a number of projects. One for example, is called Sustainable Design. That project will be monitored by me first of all. It is a fairly modest budget so most of it goes on one persons salary so it is not that difficult to keep an eye on it but the Head of School in fact is the principal budget holder so everything would have to be counter-signed by him. It all has to be accounted for by the end of the financial year which usually means a mad scramble which is not a good thing at all. We do try, you know, to budget sensibly but it isn't always that easy. You have to be cautious so you do end up with a lump of money usually.'

**65:**

### 66: THEME B) BUSINESS MANAGEMENT- Personnel management

### 67: QB.13a-Looking at the management side, how would you describe the Centre's leadership?

**68:** 'Well, it is a very kind of open leadership. I think the leadership that we have is based on respect, intellectual ability, proven ability and trust. I mean without that kind of essential trust you are lost. The trust comes from working closely with each other and knowing that the decision is thoughtful. I think you have to have that kind of human understanding. I think it is important that we don't have like separate offices for the Boss. We're seen as sharing facilities. If we have problems we all have the same. A crucial thing is the Tuesday morning meeting which we have now every two weeks. It has grown into quite a large meeting now but still follows the same format but I think

although it takes a lot of time out of the week, it is still very important that we find out who is doing what and that it is at those sort of meetings that people can voice problems that they are having, try and get some suggestions an so on. Exchange of information, so I think that is a very important part of it.'

**69:**

### 70: QB.13b-What skills and experience do you think (name of Centre's Director) bring to the Centre?

**71:** 'Well, let me see know. The skills that Paul has - he is a natural manager I think. I don't exactly know where he has got that training from but he is very organised. He is actually very well educated which counts for quite a lot and having done his Ph.D is also very good training because you know, you have got to be reasonably organised in order to complete that and you have also got to be very determined. There is also a kind of something about Paul's personality that when he says something you feel that there is this iron will there to make it happen in some way and I think that kind of clear view and determination and a willingness to listen to others, those are the kind of skills that you have bring. An unusual combination.'

**72:**

### 73: QB.13c-In what way do you feel this benefits the Centre?

**74:** 'It benefits it in that we need to have integrity in what we do and we also need to strive for quality in what we produce and I think other peoples' role within the Centre might be one of perhaps presenting ideas which then can be polished up, refined and presented in a clear way. Not one person can do everything but it is setting those clear standards for people, making sure that people are encouraged, that people are given a lot of encouragement when they first arrive an so on.'

**75:**

### 76: QB.14-Does the Centre follow any staff training and development procedures and how do these operate?

**77:** 'Yea, what we tend to do is if, we encourage people to go to conferences and so on but if they are not presenting then we think of that as Staff Development really so we try and find something from the School's Staff Development budget. The University does its own Staff Development training, things like presenting research papers or developing funding applications or managing research students. There are a whole sort of series of centrally run courses and we all go on those fairly regularly, one day courses and that information comes first to Paul probably and also to me so if there is anything on the kind of course that you think you would benefit from you just put your name down and go but if Paul sees something and says "I think you, you and you might benefit from this" then we'll all try and do it so there is the University's programme. With individuals, if they need specific training we'll try and arrange it. For example, recently we had some new software and so on and we had to buy in some training for that. It was quite expensive so we tried to include a group of people that would make the most of that and then cascade that knowledge down. That's what we've done.'

**78:**

### 79: QB.15a-How are individual roles and responsibilities established within the Centre?

**80:** 'Well it has evolved I think. The other things, as contracts come to an end and new contracts are coming out, very often people have been asked to write their own Job Description. In fact over the last few years I have written my own several times and you know, I once contradicted it which is curious but they nobody has told me what to do exactly but I have been asked to account for myself. In some cases the teaching is perhaps the most ambiguous part of what we do in that we're all, you know quite a lot of folk have got it written into their contract that they are supposed to do something or they can be called upon to teach up to six hours a week or equivalent in a block or something and that works for some people better than others. Other folk are very keen on that, other people find it can be an irritation that it gets right in the way of what they are trying to do. Other people it is not in their contract, quite a lot of folk its never been included so that ambiguity really and as the courses change and the staffing changes. I was heavily involved in History for a while and then the MA for a year and the off the MA again and then do something else and then back on again so now myself and Rachel contribute to the MA course tutorials and are meant to be part of the core team, well we are except that it is increasingly difficult. The students don't like it because they only see us for tutorials and the rest of the time is whizzing about and don't have the time to engage so I don't know if that works as well as it might but you know that is always going to be a problem I think.'

**81:**

### 82: QB.15b-Are these responsibilities monitored in any way and if so how?

**83:** 'I suppose they are to some extent. Each person that has those sort of responsibilities, we liaise with the Course Leader, we agree what we are going to do and we then we advise to do it. I think the students, they know what to expect and if they don't get what they think they are entitled to they will soon let us know so there are systems like that. If you agree to do something at the beginning of the year or

whatever, then I think you have to go along with that. We're now part of the personal staff review thing, career review exercise and we didn't used to be included in that but now we are and that is a very important exercise. The only snag with it is that the forms that you are asked to fill in have designed for academic staff, they're not designed for staff - they ask all the wrong questions - it needs to change. That career review I find very useful actually and it all depends on the skill of the reviewer as well. My last review is very good, the one before that was a waste of time. The one before that was very good. It all depends who the reviewer is as to whether take the exercise seriously yourself.'

**84:**

### 85: QB.16a-Who do you feel are the key people within the Centre and how did the Centre attract them?

**86:** 'I think the key person is Paul obviously. He was attracted originally because he is very interested in doing research anyway and in fostering research programmes. I suppose I would have to include myself as being important somewhere or other because and I don't know I have had so many different jobs to do, it is difficult to pin it down and say well he's in charge of so an so because actually I do a bit of all sorts and I have been responsible for quite a few people coming to the Research Centre and they have probably forgotten it but I think I add a contribution there and I think some of the way that the Research Centre does is being slanted because of my own interests in terms of Multimedia and in terms of CAD CAM for example. In terms of environmentally sustainable design issues and that sort of thing. Those are some of my interests and they're affected in what other people are doing. Rachel is also another important factor but it is difficult to say. I mean, for example, Mary I think has become a very important personality because he works very hard, he sets a good standard to follow. Bruce also sets a similar standard. Those are possibly some of the most important people. It is important that we have a range of age groups. Don is more remote these days in that he works from home a lot of the time. Actually Don is a very quiet man but brings a very important element in the way the Centre works because it is difficult to describe, he is like an elder statesman really and is also a very important diplomat and another quality control person. I think he actually oversees the output. He is responsible for a lot of the design output and I think he is understated but extremely keen and has this wealth of experience but he doesn't push his personality. He's not noisy but he's crucial. I think the younger researchers will possible take their lead from people like Mary and Bruce. I don't think they actually understand what I do a lot of the time and again Rachel is wrapped up working a lot of the time on the Art and Design project so again maybe he is a wee bit remote to some of the under-folk. Other people tend to be, the newer people coming into the Research Centre are just beginning to see the value of doing a research degree and need to register that sort of thing. They'll be taking their lead from people like Mary and Bruce I think, rather than us.'

**87:**

### 88: QB.16b-On a personal level, how do you feel the Centre responds to you as a researcher?

**89:** 'Lets see. It is up to me really. I have found it extremely difficult, I have to say, to practice as an artist. I can't seem to operate. I can't cut myself off from the other things that are going on so I tend to, if there is an issue going on, like to be a part of it and that does mean difficulty. Other folk are very good at simply doing one thing and not letting everything else get in the way and I have found that very difficult so I actually think that a lot of my efforts have been dissipated so that is a failing probably but if it wasn't for that, a lot of other initiative simply wouldn't have happened. A lot of people said I wouldn't be here now if I hadn't actually tried to put the initiatives in place in the first place. I haven't been very successful in getting money from the EC but I have been reasonably successful in getting money from the University for several projects which are now running and most people have said they would just never get off the ground so I have done quite a lot of things over the last few years. I am just working on a project at the moment. I have done a paper for ICT conference which, because I was working with Paul for three weeks on his project, I decided to take his project as one of my case studies for the paper and I have also written in this paper about my work and now I am trying to actually make the object, in the paper it describes making this object which is still virtual and hasn't been made yet, and I'm not actually going to get it done and I look at my diary and I think where has the time gone? Actually it has gone on things like supervision, research degrees committee, speaking to various people in the Research Centre, you know the time just disappears and when I look at it, it is largely helping other people and facilitating what other people do. I don't know how to get around that problem. Unless you just say I am going to withdraw all my other duties and do nothing else. It is like a bit of trap really, once you get involved in these things, you supervise things and you try and arrange other projects and things and your time is looking hurried if I didn't do those other jobs then I wouldn't be a Senior Research Fellow.'

**90:**

**91: THEME B) BUSINESS MANAGEMENT- Technical competence, and communication**

**92: QB.17-What previous education and training experience has been of help to your own work within the Centre?**

**93:** 'Well I've had a pretty varied training really. I started off, for some years I was running my own business, I suppose that helped a bit. I was a self-employed artist for about eight years or so then went back to University again, mostly doing Ceramics but whilst I was self-employed and subsequently just after going back to University I was doing an Open University degree as well so that has proved extremely useful in lots of ways. It has been very useful recently developing the new course because of course it is distance learning and so I've applied quite a bit of that knowledge to it. I think doing a Ph.D is essential because of the discipline of that and an understanding of research and methodology and so on which wasn't formally included at that time. It is since finishing that Ph.D that Universities have sort of taken on the idea of research methods might be useful and so the research methods training was kind of in the old fashioned way via my Director or Studies. So that is the way it went really.'

**94:**

**95: QB.18-Have any of the staff had experience in industry and if so how has this benefited the Centre?**

**96:** 'I don't know if anybody has worked full time in industry apart from my new research assistant who has worked for two major multinationals other companies and that has proven very useful because there is experience there but most folk have fairly varied experience. We have got one person who is working part-time with a company so he works for a company half the week and half the week he spends here and I suppose that has been a very useful training for him personally and we have learnt a little bit there. We have all over the years done various jobs which we don't talk about and gained a lot of experience I suppose.'

**97:**

**98: QB.19-How accessible do you feel, is the Centre's knowledge of contacts and information on current research issues is to staff working in the Centre generally?**

**99:** 'Well I think that is something we're not satisfied with. We're trying to address now through the website firstly. We have also tried to set up a linked database because we found everybody was keeping their own databases and contacts and things so we have a central database now for contacts and that sort of thing which is still embryonic, so we'll see how that goes. I think it is proving quite difficult because everybody still has rather specialist requirements so we'll see how that goes. I think the other thing that is going to make quite a difference in terms of knowledge, pooling knowledge etc. is the development of the new course because the way that works is there is as the course develops the course modules and so on, a lot of the content is generated by the students themselves in kind of dialogue with people within the Research Centre so you know various ways there will be a Course Leader but there will also be folk seconded for a short time to work on it so that is another way in which the knowledge base grows because that is going to be recorded on the website so there it is documented and so and can be accessed in that way. A lot of knowledge is always bound up with people and it is difficult to make it accessible.

**100:**

**101: QB.20-How effective is communication within the Centre and how does this occur?**

**102:** 'I think communication is reasonably good. The primary way communication works is through the Tuesday meeting every two weeks now. As I said before, I think that is rather essential element. Obviously we work in a reasonably open-plan office anyway. We are now working on two separate floors but essentially people come and go between floors all the time. I don't think that is an ideal system but it is what the building we're in, and I don't think it is satisfactory that we have got to actually go outside and back in again. We'll get round that problem in due course. I think the building and the situation has proved to be a very good move for us. I think on the down-side we're away from the main building and couldn't possibly be seen to be rather remote to the staff. That is not good. But I think even where we were before we still seemed to have that problem. It is not just a physical location problem, it is something we have to work at.'

**103:**

**104: THEME C) ORGANISATIONAL DEVELOPMENT-Resources**

**105: QC.21-Looking at the Centre's resources, what do you feel are the major assets within the Centre?**

**106:** 'Well the major assets are - we have our own equipment in terms of like computers and printers and that sort of thing, photocopier, fax machine all that 'officy' stuff. We have one or two larger pieces of equipment. Well larger in terms of expensive. We have a new CNC machine for example which is based down in the main building, so there is a table, quite a large table for making models and things and we also have like video equipment, so we've got digital video cameras and that sort of thing but we also, I suppose, have access to any

equipment that we require in the School if anybody needs it and that would go for the rest of the University as well, so, for example the Engineering Department has got a six access milling machine which I have never actually seen yet but in theory we could use it and there is all sorts of facilities around the University most of which we don't know about. We try to keep abreast of it but if there was anything else we needed we could probably get access to it if you go through the right channels. Occasionally, you know, we use some bodies else's video editing suite or something like that. I think it is important that we have our equipment for a lot of the jobs. We have things like a data projector which is in here somewhere and that is very important that we have that. At one time we did borrow the School's kit but it was getting very difficult. It all belongs to the School in one sense but it is important that we have our own equipment at base. '

**107:**

**108: QC.22a-Does the Centre have any substantial income generating activities and if so how did this come about?**

**109:** 'Well, I would say that at one time we, myself and Paul were all involved in trying to get grants. We spent a lot of time and effort doing it. In fact for all the time and effort we put in we haven't got an lot to show for it. We are all sadder and wiser really but what we decided to do was to employ someone to help us with that and at the same time we have been more successful. We have been successful internally within the University and we have been fairly successful in getting relatively small amounts of money and also sponsorship we have been very successful in that so those, I think, until a funding body emerges for Art and Design we can apply to the region, I personally, am not going to worry about the EC, actually that is not strictly true, I am going to put in something and I'll probably be part of the latest bid but I am not sure. I constantly get stuck down because I have put in bids before so I'm on the mailing list. You look at it and think I'm not going to waste another six months of my life doing that. I mean it is just that it is so expensive in terms of resources. If you get nothing back at all, all you're getting lost time, you can't even put in on your CV because people look at it as a failure. The fact that millions of other people haven't got the money as well, may have come very close but not quite close enough. You know, a miss is not enough, I know it's worth going for sometimes but at the same time I found ourselves trying to squeeze ourselves into a research model that we were interested in doing. If we had got the money it would have been more of an embarrassment than a blessing. We'd think 'gosh, thank goodness we didn't get that grant, what would we have done with it' so it is a two-edged sword really, money.'

**110:**

**111: QC.22b-Are there any areas that are a substantial drain on the Centre's resources and if so what effect does this have?**

**112:** 'Well, I don't think so really. I mean most of the money that we have, well the vast majority of it goes on staff and we look reasonably well equipped but you know, we don't spend that much money on equipment really and we are obliged to upgrade some things to keep up to date and keep renewing all the licenses and all that sort of thing. We try and equip everyone with their own computer, well everybody has got their own computer, that is essential. I don't think there are any massive drains really.'

**113:**

**114: QC.23-Is the Centre able to use other resources than its own and how**
**115: does it go about securing access to these?**

**116:** 'The University top-sliced the RAE money that comes to us and that is a fairly hefty top slice and I don't think we get our moneys worth. We could be doing better, certainly on network services. What's happening, for example we've employed another Applications Supervisor for our team and we're paying half that persons' salary so we get IT support there. That has become fairly important as the Centre has suddenly started to grow, we've got sixteen or seventeen computers perhaps all of which seem to have their own individual personalities. We need help to keep things working.'

**117:**

**118: QC.24-Apart from the staff, who do you see as having a vested interest in the success of the Centre and why?**

**119:** 'Well, um, let's see. I think the School see it as important now. I think it is a very odd thing the way it has become an important part of what people do. A few years ago it didn't exist so what was there before but I think it has become important, people do see it as important. It does have a reasonably high profile externally and as I say, it does fit in with what the University have come to regard as their mission statement and also if you read things like Dearing and so on, they point up a similar strategy and that is coincident rather than planned but that is just fortunate really but it is logical and I think it is logic that is bringing people together to share in knowledge and resources. It seems obvious really but before that there were people working as researchers in odd pockets, broom cupboards and all over the campus and no-one was really talking to each other so it has been a useful exercise I think.

**120:** [Probe-Outside of the University do you see anyone else having a vested interested in the success?]

**121:** Well, not really. I think a lot of people in Art and Design are interested to see that we don't succeed because it is thanks to the research assessment exercise really, the way the criteria is drawn up, everybody is now competitive. Institutions are now in competition and to some extent so unless you are carving out a distinctive niche say, that nobody else is really interested in, or in other words if they can that you are doing whatever it is and therefore we can leave that alone. It is the fact that we are trying to do things on several different fronts that it means that we are in competition with other Institutions for recognition and I think that does create resentment. I think that again is a structural thing. I think this RAE exercise is fairly destructive really. I can see it is essential, we've got the money from it and so on but it does actually work against collaboration and I think that is one of the problems.'

**122:**

**123: THEME C) ORGANISATIONAL DEVELOPMENT-Networks**

**124: QC.25-Moving on to the Centre's contacts, does the Centre have representation on influential national or international research bodies and how has this been achieved?**

**125:** 'Well that is a good question because I don't think we do really or not enough. I mean individuals within the Centre are all members of various things, Designers Society or European Academy of Design, whatever it is. Some of us have been asked to take a more active role in some of these things. I was nominated as a specialist adviser on the last RAE panel for example. The RAE panel, I mean how that's formed seems to be rather arbitrary, if somebody could tell me I'd be very interested to know. I certainly think Paul should be on that panel really given in terms of what goes on in the region, our money is very important and we should be represented I think. How that comes about I don't know. I think you have a member of CHEAD or some other thing and be nominated through them. I don't think other people in the region are liable to nominate anyone and if we were asked for a nomination, the chances are we wouldn't nominate any of theirs for the same reasons so I don't know. I'm curious to know how we get round that. Paul certainly is a part of various networks and he would be the best person to ask about that. We have had only one meeting so far and we had planned another meeting for March which didn't happen, it will probably happen now after the Matrix Conference. What we are going to do is set up a website and host the website on our server but essentially it will be a semi-open website. The way that works is that in order to get access to the website you have to complete a full registration which gives us information about the type of research initiatives that the Institute is taking part in. We then will put that information back into the website so if you went into the website it is really trying to highlight who is doing what/where in the world/country, what resources are available for research and training. It sort of includes like a map/diagram really of initiatives that are going which hopefully is going to be updated but you know that is the website. The other side of it we hope is going to be regular events which take place in different institutions so the next one will probably in London and after that we'll have to see where it goes from there but it is really is to provide a support network for institutions who want to exchange information about supervisory practice. In fact, Paul can probably give you a more detailed description of what it involves.'

**126:**

**127: QB.26-Does any of this provide industrial representation?**

**128:** '[NOT ASKED IN THE LIGHT OF ANSWER Q25]

**129:**

**130: QB.27a-Has the Centre developed any partnerships or collaborative projects and on what basis are these arrangements normally made?**

**131:** 'Well, we have had a few I suppose. We have had one I was involved with they came to me because they wanted someone to act as a Lead Researcher for a project called ADER - it was several years ago that it started - it was called Art Design Education for the Region - but that was initiated by a group of art schools. Denison was the prime mover, that was Trenton College and that included Roughborough School of Art, Lloyd College with National College of Textiles, Fullerton College of Art and one other which I have just forgotten, but there six of us involved and I was acting there as Lead Researcher for that and we produced a document report and again it was looking at - it was a share funded thing and it was looking at the collaborations that have taken place between industry and the art schools within the last few years and coming up with kind of recommendations for good practice for running things like placement in industry and that sort of thing. We had a exhibition and also a conference and a couple of reports and that was that. That was one example, I think there have been others. Another one I was involved in which was writing a Research Methods Training Course, about just general research methods. It was West College, it was called the Institute I think and Bainbridge and ourselves. I think it ended up with most of those being sleeping partners as it were so it ended up with West College and ourselves doing most of the work so there were six authors and an editor on that one and I think that is now going to be revised and published on the website so it was a useful thing.'

**132:**

**133: QB.27b-To what extent is the Centre dependant on the (host University) and in what way does this impact on the Centre's work?**

**134:** 'Well, I think we are dependent on the University for a lot of things. Certainly for things like research students we rely on the Academic Affairs Office for advice and so on. Funding comes the Research Committee decide on how the funding is going to be divided up. According to the rating that you get, there is still some discretion in that. So, yes, we really rely very much on the University - for Library support, IT support for information conduit, for all sorts of things, for advice, anything really.'

**135:**

**136: QB.28a-Does the Centre benefit from links and contacts from within the (host University) as a whole?**

**137:** 'I think there are at least two key committees I think. The Research Degrees Committee and the Research Committee and that means that we are in touch with all the people. We know which research groups are active, whose in them and we meet those people so we know for example, if we wanted some help with multimedia or information technology or computer science or whatever it was, we'd roughly know who to speak to so it is very helpful - so there is that network, there are kind of Heads of School network as well. We have a good system there I think as well. We have got a new Head of School - well we have got an Acting Head of School which I sincerely hope will become Head of School but that has actually happened fairly recently and has made quite a difference already actually in that I don't think we had a particularly good relationship before. It was a problem in many ways but that problem has gone and now we have an extremely good relationship I think. I think the trust is back and that is great because it seems to be working very well. That was a crucial problem resolved.'

**138:**

**139: QB.28b-Would you describe the Centre's relationship with (host University) as: a) active and mutually beneficial, b) sometimes at odds but usually supportive, or c) difficult and sometimes strained?**

**140:** 'Lots of the initiatives were not taken forward simply because we were working to two different agendas. The previously Head of School had her own agenda and often felt isolated I think and frequently would intervene, you know an initiative might be at the start and you might go along and talk to her about it and the response would be "it's the first I'd heard of this!" - "well actually yes, that's because I've only just told you!". Everything was seen as a bit of a threat to undermine the position and that was a shame and I think we were frequently on the wrong foot and I think he felt increasingly more as if he had to have all the budget thing and everything counter-signed, and in the end the whole thing just stifles it. The new course wasn't pushed properly. Something like that has to be championed in the right quarters. We can't do that ourselves and he felt that he hadn't come up with the idea and therefore wasn't going to support it. Anyway that has all gone, you know, thank God, and we have got somebody who has a _and is an enthusiast and is very quick to understand the implications for the School. He is very much a kind of champion which you have got to have - these key people - otherwise you've had it because we are not represented on every committee and the kind of committees that make the difference, like within the University, you have got to have people. There is the Academic Council for instance, there is the Strategic Management, SMT they call it, there is something called PEG which is Policy something - can't remember what they're called now but these committees are absolutely vital because they decide on policy and you have got to be represented otherwise you can't get anywhere. We're represented OK on the research side but not really on the Strategic Management side so we rely on Head of School to do that to make that link, it is absolutely vital otherwise we wouldn't develop, we'd be marginalised and we'd soon suffer.

**141:** [Prompt on a), b) or c): What brings you to that conclusion?]

**142:** I'd probably have to go for b) I am afraid. I mean a) would be nice to say that but honestly you know it doesn't always work well. Again I think that is possibly nothing to do with the work that we do it is more to do with the perception of what Art and Designers do and it is something that the whole profession needs to tackle. We are extremely bad at letting people know what we do. Really good design is virtually invisible, you are not even aware of it because it is good design it works and so a lot of things people don't really understand what is behind it.'

**143:**

**144: THEME C) ORGANISATIONAL DEVELOPMENT- Market responsiveness**

**145: QC.29-How do you market the Centre?**

**146:** 'That is another good question because it something which we, the strategic group, have started to think about a bit more. I don't think until relatively recently we considered it. I suddenly feel that we need really to begin to address it. The two main ways that we do it at the moment, one is through trying to get a website more coherent and the other is through quality publications. I think we have got a

problem there though with distribution at the moment. We come up with nice publications but how we actually to get them out the door into the right places is another question you know. Not an easy thing to do. It could be a full time job for somebody. So I think what we are trying to do is come up with a more kind of rational view of what we do and produce perhaps a couple of statements which says, "well this is the thing, the research that we are interested in, what we stand for" and environmental stance perhaps, or environmental in terms of community as well as ECO design etc. There is that kind of aspect to it. It is a tricky area. We have made some advances in terms of this, at one time the debate was all about research methodology in Art and Design and actually I think we have won that argument to some extent, I don't think we have got any hang-ups about practice base research anymore, we just do it and that's it. Other people are still getting there you know other Institutions are still on the point of saying "what is research?" We are doing it alright, we've gone down there a long time ago, we've got the work to prove it - it is on the shelf - so it is a lot easier now than it was and I think our new students coming through are finding that there is some sort of structure to work within, they can see what they have got to do. We've got examples of completed thesis' to look at.'

**147:**

**148:** **QC.30a-How would you describe the image of the Centre?**

**149:** 'That is a difficult one. I don't know how other people are perceiving us at the moment. I think they are probably getting confused messages which is something I think we do need to address because I'm not sort that people - they may see us as a separate entity from the Arts School for example but it is a very difficult thing. You know, this balance between being part of the Institution yet being seen as a separate entity and it would be a lot easier if we were marketed as a separate entity but then I think that would cause a lot more problems in terms of general resentment and so on. I think the way we are doing it is to identify clusters of researchers within what we do and promote them rather than promote the Centre. So, I think I see ourselves as being a kind of supportive unit for all these other activities but I am hoping groups like the Art Design people will eventually hear of that as an important group and perhaps other groups will emerge as well. It is certainly something that we should keep under review, put it that way. Constantly looking at it and thinking "what are we doing about it?". We have got Don the principal designer in what we do and I think what will also help us is the new course because that will given us another kind of focus and every student that does that will become hopefully a kind of disciple, if you like, an advocate.'

**150:**

**151:** **QC.30b-How do you feel this image is perceived by the outside world?**

**152:** 'I think people think that we are reasonably well organised and I think most people would think of us as reasonably advanced in the field. Most people I speak to outside have got maybe one or two students, they are working on a very small scale, probably don't have any budget, probably don't have any full time researcher. Probably only one member of staff is an enthusiast and the rest of the staff can't understand what they are talking about so we are constantly coming up against people that are isolated. A lot of people don't have any supervisory experience to draw on and a lot of people in Art and Design haven't done any Ph.D type of research so they don't quite know what it is all about and other institutions, you know the staff feel a bit threatened by it all, you know the staff are being told they have got to come up with their research, where is it and why haven't they done it, so there is a lot of that I think a lot of people see us as being very well organised about it really. I think there is a certain, I think we are in a different league really. I think there are a few bases that have been very strategic, gone about things in a sensible sort of way. At Huxley for example, they have done things a very strategic way and said "Right, we're going to go for teaching companies schemes, this is where our strength lies and we're just going to go for that" and they've done it, you know, and done very well out of it but other people, you know you've got Margaret Hooper down at Loughton for example, a very dedicated kind of area of interested, it is more to do with Design Management but you know, they have got funding, they've got the Centre, they've done it. You know more about these places than I do I'm sure. A lot of people have given themselves a name but when you actually poke about there is nothing there. There are a few like that. So I am quite pleased to be part of something which I think does actually have some substance. I think the content will speak for itself. It is far more important than to project an image, although it is important, you can't unfortunately ignore the RAE. You can't ignore the fact that is made up of empowered people that have a very knowledge you know, some of them know a lot and others have never visited any other institutions than their own. If they haven't heard about it, they don't know they exist. Do you know what I mean, it is like you have got to get it across, it is a propaganda exercise unfortunately.'

**153:**

**154: QC.30c-Do you think the image of the Centre has changed since you first started work in the Centre?**

**155:**

**156:** Yes, I think it has, it is now grown a lot. We are beginning to mature. I don't think we want to get any larger, I think if we did that, we'd be getting unmanageable really. I think what we will see are groups within it and I think we are seeing that already.'

**157:**

**158: QC.31a-Who are the Centre's key clients and could you explain their importance to the Centre?**

**159:** 'Well, that is such a complicated question because there is money coming in from various sources. Again we're having difficulties in that things like the Arts Council and so on don't like to be seen to be backing one Institution over others and so it is difficult to get money for research but on the other hand if you go to them as an individual artist then you'll get money possibly - but not very much. There are some odd places that see what we are doing is important. I think I'd be interested to know myself how we're perceived generally by people. We have very good contacts with things like the National Sculptures Trust, we do have contacts with the Arts Council and things like that. The Craft Council, The Design Council, all these bodies we have some sort of contact with. We don't necessarily get any money from them though but we try to involve people from those in what we're doing. We bring them in from time to time and so on and try and say, make them advisers on research projects and that sort of thing which keeps them in touch with what we're up to. There are quite a lot of things like that.'

**160:**

**161: QC.31b-How does the Centre manage its relationship with them?**

**162:** '[NOT ASKED IN THE LIGHT OF ANSWER Q31b]

**163:**

**164: QC.32a-How effectively do you think the Centre identifies the needs of its clients?**

**165:** 'It varies from place to place. It think in some cases we're trying to establish a new model and it is difficult. Whenever you are trying to do something new like that, for example, the Art Design projects is worked with a group which is part of another group. I've forgotten the organisation that runs it but anyway they have their own clients, if you like, and they're trying to project the historical museum type of thing so it is important that the Forum understands how that works and they have an exhibition which took place in the house, contemporary objects in the historic setting but that actually goes further than, it is not just about finding a new venue for interesting work, it is about what we do out in the community, it is about creating a kind of new means of commenting on heritage and on issues. It goes much deeper than simply putting things in, it is how these things are seen, things were made specifically to that environment so that is quite an interesting one really because that is very much trying to find a new means of getting what we do out into the community. It is actually a very difficult thing to do. People have shows in the Art Gallery for example, and that sort of thing but creating new ways of doing it is actually part of the research I think.'

**166:**

**167: QB.32b-Has this led to the development of any new products or research contracts?**

**168:** 'Well we have, let's see, Rachel would be the better person to talk about this because she is the co-ordinator in the Forum but the Forum certainly has developed and is now, the latest show being part of the furniture group so that has developed. They have also invited people from other institutions to take part in that group so that helps. In my area, my project which is called Sustainable Design involves working with a company with Recyclability and a major regional company and that actually is at a very early stage that project, although it has been, I have trying to get it off the ground for well over a year. It took about six months to get any funding and I thought great, then it took another year to find someone who was capable of doing the work and we starting off looking for research students and all sorts of problems to take it off the ground. So it has taken at least a year before we started. We started just before Christmas. So far it has one site visit and so it is actually at the early stage but eventually that will begin to make an impact. I think that could be a very interesting project and of all the work that I'm doing, I think I would like to continue with that.'

**169:**

**170: QB.32c-Do you employ any methods to monitor the quality of work going out of the Centre?**

**171:** 'Yes, everything is put to be checked, usually should be checked by Paul. Well it will either be checked by one of us but Paul should ultimately see it and he sees most of the main things. He can't look at everything but I should think he looks at everything that's going out as part of the research centre. I think Don would also be asked to look at it as well probably in most cases. I certainly ask Don to look at

everything I do because he has got a real talent for it and I also ask Paul to look at it and I usually ask someone else to look at it as well. In some cases, like the website, would be looked at by the Head of School as well, so things like that. There are several people who could look at it. Nothing would go out without someone looking at it. I mean it is difficult if individual researchers want to write to somebody, well we try to advise them on that and usually stuff is checked, mistakes do arise occasionally. In terms of bids, the University now has a policy, a new handbook has been produced and everything has got to go through multiple layers of scrutiny and so on which adds about three months onto it. It is all necessary stuff but what used to happen is that we would work up to the deadline and then suddenly realise that someone had to sign it, bomb over to School and get somebody out of bed to sign it. They realised that that was putting them into a vulnerable position because they were signing away their authority. Some of the things that I put in were great, you know, one of the conditions was that the researchers had to be employed for twenty five years or something, so that went in and they all signed it and never got a chance to read it. We never got the money so they weren't held to account but I think they realised that they were signing things that hadn't read.'

**172:**

### 173: THEME D) SECTORAL ISSUES-Market Capacity

### 174: QD.33a-Moving on to the last section, I would like to look at the specific market environment in which the Centre operates. Are there any legal or regulatory issues which the Centre has to operate within, especially being part of a university?

**175:** 'There is the usual employment legislation such as Equal Opportunities, Anti Discrimination Acts all of that stuff. Health and Safety. Can't think of anything else off-hand. The copyright issues are a real nightmare for us. That has proved quite a problem. We haven't actually been prosecuted yet but we're aware of it and we have to be really careful about the material we put out. Recently Mary had her Ph.D published on CD. It was an electronic thesis anyway, it is still then had to be converted into a form that could be put out on CD and as soon as she did that, she had to get permission from loads of people for illustrations and things that went in it. It turned out that she simply couldn't get permission. There weren't that many really but it was a big job. So yes, copyright can be bit of a nightmare. I don't know if we have come across any other problems as far as that goes. I think it is probably going to be an increasing problem. It is for anybody really, once you start with the internet. We have lawyers within the University who can help us with contracts and things. We had a contract with a mjor regional company recently which needed various people to look at it, Academic Affairs and so on, I don't think we've ever signed it but just left it. It doesn't sound too good does it but actually we do try and do things properly.'

**176:**

### 177: QD.34a-How would you describe the market in which the Centre operates within?

**178:** 'Well actually, using the term market is interesting because I don't think many of us actually realise that we are a market at all. It is not a term which we tend to apply to what we do. As soon as you apply that term, you know, it is interesting I think it is becoming clearer for me because of my involvement in the new course. There is a clear marketplace in terms of market the course and get people involved - they have got to pay their own way so you know I am very aware of it from that point of view. The research that I do when I am not doing that, I think most of it is really all part of creating this general background for what we do so you know, you can't write a paper or anything without going to the Centre or do some of the work that going on within it. We got a paper published the other day on creating digital thesis. For example, one of the referees said "well, I can see they're doing a lot of work but what about everywhere else" and I was thinking "oh well I don't know what everyone is doing everywhere really". I took his point and tried to do something about it but there is a tendency, certainly what I've got, to write documents and things from our points of view. But as for marketing, I think it something that we do have to address more clearly. It is complicated when you have got so many different initiatives.'

**179:**

### 180: QD.34b-What would you say is the existing and potential demand for the Centre's products and services within this market?

**181:** 'Well I don't think anybody is beating a path to our door at the moment. I think most of the people who come to us are interested information about research supervision, about 'how do you actually do research in Art and Design?' so there are a lot of people who are at a very basic level at the moment, so they are looking to see how it is done really and looking at the model that we have created but we don't mind that because it actually years to get to this level and a lot of commitment. You can't just invent it overnight even if you tried. It will be interesting to see what comes out of it. Other places have gone down a very commercial route and I've never known how well that is going to work because all their output is confidential.'

**182:**

### 183: QD.35a -Who have been your key competitors as the Centre has developed?

**184:** 'I think in the region, Denison would be an obvious one. They're trying to push things on design and they have got their new art

centre where they are trying to label it up and present it various ways and actually we're fairly annoyed to some extent in that they got a 5 for basically, when you actually look at the content it is pretty vacuous. I am being fairly critical, they've never supported formal research until very recently and you know, it is all hot air really, but what they have done is involved the local community in a very much more direct way than we have succeeded in doing and as a result they have got the town council, they've got EC funding and they've built an Arts Centre. It is going to be a very important centre I think and that is going to have great benefit to that School. It think initiative was extremely good and well carried through and we haven't got anything like that -that is the only thing that I consider they have done well and in terms of the rest of the research it is absolute rubbish, it is a joke. They haven't got anything at all. The don't know the meaning of the word research at all. Roughborough for example, they've got nothing but they have got going and they have got the top floor that they have committed themselves to working with a major company and we won't hear anything that they have done because commercially its sensitive and I don't know I think that has been a flop as far as research goes but we won't know. They could be doing marvelous things behind closed doors but no-one else in the region is anywhere as far as research goes. Well I don't what else I mean across the border is another thing altogether. I mean you probably know a lot more about what is going on than I do so I think Birmingham are quite active on their research methods and I think they could be doing a lot. I think through our FAD group you see, we want to try and collaborate with these people as opposed to working on initiatives. It makes a lot more sense, certainly in the research training it must be sensible. So there is the research initiative in Newington, I think they are doing a very good job but if you look at the case studies that they use for their material, guess who is providing all the case studies? You know, I'm one of them, Paul's one of them, Rachel's one of them. I don't know who the others are but if they want to bring it up to date I could guarantee where they are going to come from. The next lot is here. I know they are doing good work actually and they've developed their own students and done some very good things. Moorland has done some very good things. You know, Brinton College has done things through their conference thing, low level really. They've had problems, I suppose it is not them really but the number of Institutions who have had their degrees validated by the OU, which isn't necessarily a bad thing, but what has happened is that not only have they got to get through their own research degree committee which usually has got no representation from Art and Design at all and if they have managed to do that then they have got to get through OU which again has got no Art and Design representatives on it, so you know, they are usually savaged before they get anywhere. Another reason why they come to us for help is because we can perhaps help them with that side of things. But, you know, we have had a lot of, we have had to fight our own battles in the past with similar committees and things and it has been a long haul. We have only done it through determination, it has been essential to be represented in the right places and also to have a track record.'

**185:**

### 186: QD.35b-How have they affected the Centre's growth?

**187:** 'Yes, I do because the last successful research exercise was a surprise to us, that was possibly a knock-on affect of them getting a good mark.

**188:** I think another reason why but you know, if we've got a low mark it will be much greater. But actually we haven't done too badly. We have a lot more money, well we could spend it. We have to bring in a lot more, we can only spend so much on the staff that you have. You know you then have to re-think and come up with some new initiatives. If somebody said "well here's £100,000 what are you going to do with it"? I could come up with loads of ideas. I can spend money, no problem. The sort of research that I am interested in is applied research which is designed to help people very directly. We don't do very much by way of some blue sky research.'

**189:**

### 190: QD.36-Have you experienced problems of recruiting or retaining staff due to competition?

**191:** 'Not retaining, recruiting definitely. It took me over a year to find one person for one project. The problem really is the sort of skill set that you are looking for is, in some areas certainly, say multimedia or product design or whatever, you are looking for a very skill set whereas commercially people are prepared to pay a lot more for those skills so it is a real problem. Certainly in research students - most research students aren't interested. We're asking them to do a research degree, five and a half thousand or something stipend, if they are that good they won't work for that sort money. We could probably get painters to work for that but we can't get designers.'

**192:**

### 193: THEME D) SECTORAL ISSUES- Macro-economic growth

### 194: QD.37-Now looking more broadly at issues that affect the Centre, is the Centre affected by the state of the economy and in what respects?

**195:** 'This is a good question really. We are, but we probably aren't aware of it. Bainbridge's economy is based on largely on a single industry and in the past, for example, the money for the original six research projects of the University came from a grant from companies

in that industry. We've forgotten all about that now but actually we won't get any more money from the industry now because they are laying off their staff by about a third every night. You will see - if the Bainbridge economy does change significantly because of that, that will certainly have a knock-on affect in time but on other hand one of the roles that we should have as a research centre is in, you know we should be setting up structures to actually encourage companies plan ahead. Philippa's initiative for example, is designed specifically to do that in the craft industry, to introduce small companies in to technology. Robert Trump's project, called the Building Links Project is again designed to build these industrial links to help companies diversify in terms of design. So those are the kind of ambitions behind those projects, they are very ambitious for basically the one of two people involved in them but that is the type of thing that we should be doing and I think, as pressure comes on the community they'll become more and more important.'

**196:**

### 197: QD.38-Has the Centre been affected by changes in society generally and in what respects?

**198:** 'Well possibly things like the Dearing report and that sort of stuff will affect us. I think if the Art and Design Research Council, well there is a new Research Council but if it gets off the ground and gets to fund research in the region then that will make a difference because then we'll be bidding for money for that and I think we should stand a pretty good chance of getting money from it because we're well organised to do that. We have some experience now in trying to get money. That should be a doddle compared with EC and the other ones.'

**199:**

### 200: QD.39-Is the Centre affected by industrial change generally?

**201:** '[NOT ASKED IN THE LIGHT OF ANSWER Q37]

**202:**

### 203: QD.40-Are there any consequences of government strategy that affecting the Centre?

**204:** '[NOT ASKED IN THE LIGHT OF ANSWER Q38]

**205:**

### 206: *KEY SUCCESS FACTORS-QE.41a-How successful do you believe the Centre to have been?*

**207:** 'I think it has been very successful actually. I think you can measure its success by the fact that by the number of PhDs that have been completed since the start of the Centre which is good. I think the quality of the kind of output is high. We've got quite a lot of active researchers who are all working very well. We haven't lost a lot of people, a couple of people have left that's all, when their contracts have come to an end but we've also been very keen to keep people on who have shown themselves to be very good researchers. That is very unusual. In other kind of subject areas it is assumed that when you finish you go but because they are so rare we hang on to them. I think that is a measure of success.'

**208:**

### 209: *KEY SUCCESS FACTORS QE.41b- Can you describe the key factors which you feel have contributed to its success?*

**210:** 'The key factors are Paul Gray's personality has to be extremely important. The fact that there is a number of people that are very enthusiastic. There is a lot of enthusiasm for doing the work. I think having people who have done PhD's is very important because, I suppose I am biased because I've done a PhD, but I did think it was a very important thing and without it you miss a crucial understanding of what it is you are trying to do. I think that is about it really.'

**211:**

### 212: *KEY INHIBITING FACTORS-QE.41c- Are there any key factors, which you believe have inhibited (the Centre) from becoming more successful?*

**213:** 'Well, I could have done with more money I suppose. I think we had problems with the last Head of School to be quite honest. I don't think she helped a great deal. I think compared with most Institutions our Institution is fairly forward thinking. You know, it accepted peoples' digital thesis no problem at all. I thought there was going to be real hassle over that, no problem at all. So, yes, I don't think that too much of a problem. We could have had more problems but when you think about it, we have been given space, we've been given resources. People have been given some career advancement. I think, actually, that is a problem and will become more of a problem in future in that the difference between say the way the Institution regards researchers and academic staff - to give you one example, the equivalent academic could get 50 days holiday compared with 20 days holiday for the difference between salary scales and all that sort of stuff is marked, there is a clear distinction and that is no good. You have to give people a proper career route. You have got to make things like, I mean things like this Institute has a Readership thing where you can apply to become a Reader but no full time researchers are eligible for

that qualification so there are things like that where you have got to have this kind of equality across the staff, that needs to be addressed and the proper career route for people. That is only just beginning to be a problem. People can't see that there is actually a career as a researcher. It is like one conference to another. It is more acute for other subject_ actually. If you can't retain staff, if you're going to that you've got to give them reasonable job security. It is extremely expensive trying to recruit. I think next year there will be quite an interesting time, always about twelve months before an RAE audit the headhunters are out that will be quite interesting. The same will happen this time and we'll just see what happens. I don't think, I know people have been approached from here by other places on a number occasions and haven't been tempted to leave as far as I know. I think last year a lot of us would have been more tempted but now we have got a new Head of School it does make a lot of difference. I hope that was helpful.'

**214:**

**215:** CLOSE

**216:** *Many thanks for sparing the time to help me in this study. I wonder also whether you would mind me contacting you again further if I needed further information although it may not be necessary. Once again thank you for your help in support of this project.*

# Glossary of terms

| | |
|---|---|
| AHRB | Arts & Humanities Research Board |
| CIHE | Council for Industry and Higher Education |
| CNAA | Council for National Academic Awards |
| CVCP | Committee of Vice-Chancellors and Principles |
| CVE | Continuing Vocational Education |
| DORCISS | Directors of Research Centres in Social Sciences |
| DTI | Department of Trade and Industry |
| EPSRC | Engineering and Physical Sciences Research Council |
| ESRC | Economic and Social Research Council |
| ESF | European Social Fund Regional |
| HE | Higher Education |
| HEFC | Higher Education Funding Council |
| HEI | Higher Education Institution |
| HEQC | Higher Education Quality Council |
| PCFC | Polytechnics and Colleges Funding Council |
| PFI | Private Finance Initiative |
| RAE | Research Assessment Exercise |
| RDA | Regional Development Agency |
| SCOP | Standing Conference of Principles |
| SHEFC | Scottish Higher Education Funding Council |
| SRHE | Society for Research into Higher Education |
| TCS | Teaching Company Scheme |
| UCA | Universities Funding Council |
| QAA | Quality Assurance Agency |

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