Theory and Practice in Art & Design education and Dyslexia: The emancipatory potentials of a neurodiversity framework

Lynda Fitzwater [†]
lfitzwater@ucreative.ac.uk

ABSTRACT

In the UK, Art and Design Higher Education currently faces multiple challenges regarding its validity, efficacy and cultural value. These challenges are tractable against a complex historical background of successive governmental agendas aimed at both widening social participation and increasing professionalization/standardization. A specific problematic in this context is the teaching of 'critical', 'theoretical', or 'cultural' studies components on undergraduate degrees especially where written outputs are viewed as separate to visual work. The complexity of equitable and effective instruction is increased by the high proportion of neurodiverse, as opposed to neurotypical, learners engaging with this sector of education. In this paper, the pedagogic potential of re-interpreting the problematics of traditional academic writing for Arts students through a neurodiversity framework will be assessed through case studies of the two primary dynamics evidenced in literature, both of which are at play in the teaching of non-visual concepts to art and design students. Adopting a neurodiverse framework, so I will argue, undermines the most pernicious aspects of neoliberal management routed through competitive differences, and empowers students to access truly emancipatory forms of learning.

1. Introduction

In recent years, the relative value of Arts higher education in the United Kingdom, in contrast with STEM subjects,[1] has been much debated in both academic (van der Wende, 2011; Liao et al, 2016; Sochacka et al, 2016) and journalistic/populist contexts (Matthews, 2013; Jackson-Hayes, 2015; Chea, 2015; Britton, 2017). In the UK, this debate has been variously ideologically

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† University for the Creative Arts, Epsom, London, UK.
[1] STEM (science, technology, engineering and mathematics), and STEAM (science, technology, engineering, arts, and mathematics) are terms used in educational policy.

framed in terms of earning potential (de Vries, 2014), student satisfaction (Pawson, 2012; Yorke, 2014; Sandler, 2015), young citizens' personal development (Watermayer, 2013) and underrepresentation of women and minorities in the STEM-field (Van Tuiji & Walma Van Der Molen, 2016).[2] In §2 I discuss this through the historical and ideological formations of the current Art and Design education landscape, providing a context to an examination of the development of theoretical and critical components in UK undergraduate programmes. I show how the pedagogical role of theory teaching in Art and Design is important to examine in light of academic discourse and journalistic commentary upon the relative value of an arts degree based upon earnings. In §3, I situate how the above should feed into our understanding of the agenda of widening participation, a policy for increasing the numbers of social underrepresented groups in higher education. This shift in emphasis substantially reconstituted the Art and Design student body to include a large proportion of SpLD (Specific Learning Difficulty, Mortimore, 2013) learners, and particularly dyslexic students. SpLD is 'a category that overlaps with dyslexia but refers to a wider range of learning difficulties' (Frederickson & Frith, 1998) and as such has become the leading terminology within the discourse of the provision of non-academic services to support learning in Arts higher education. Here the ideologies of different models of disability (medical, deficit, social, embodied, affirmative) will be outlined in relation to the emancipatory framework offered by neurodiversity[3] as an understanding of human differences. In §4, I go on to develop analyses of the potentials that neurodiverse understandings of learners' identities and abilities have for demystifying perceived pedagogic problems in the teaching and learning of the theoretical elements of Art and Design undergraduate programmes. I will finish by arguing that reconsiderations of the complexity of the interactions between learners' neurological uniqueness and educational environments through the framework of neurodiversity, as opposed to traditional models of difficulty or disability, may be enlightening for breaking down traditional boundaries between the separate theory and practice spheres in arts education.

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[2] In the current UK political and ideological climate, it is possible to read these agendas' anxieties as a manifestation of xenophobic nationalism.
[3] The term is a portmanteau of neurological and diversity.

2. Context: ideologies and desideratum surrounding theory teaching in Art and Design

In this national landscape of a 'knowledge economy' (van der Wende, 2011),[4] Art and Design education has found itself variously championed as the engine of the UK's supposedly internationally envied 'creative industries' (Comunian et al, 2015; Dawood, 2017), somewhat unfortunately harking back to the Blair years' deployment of the 'cool Britannia' banner (Hall & Thompson, 2007). Art and Design is also subject to co-option to the neoliberal agenda of 'creative education' in service of 'soft skills [...] of benefit to young people in whatever sector they were employed'.[5] This approach of curricular organization around the short-term satisfaction of "market" forces, through metrics of employability after arts education, is much derided by Gielen and De Bruyne in their imaginative theorizing of arts education as a catering regime, fulfilling clients' pre-determined criteria of mediocrity (2014). The pervasiveness of neoliberalism's potential to attract seemingly agentic alignment to its values is more generally problematised in several strands of broader research such as Zepke's critique of student engagement's recent ascent to cynosure of pedagogic policy, gaining "its high profile because it aligns with and supports a neoliberal ideology that has an instrumental view of knowledge and emphasises performativity and accountability" (2014: 697). In a similar vein, Raaper and Olssen's Foucauldian analysis of the casualization and standardization of UK academia (2016) similarly traces the tributaries of strengthening marketization and competitive auditing. At a structural level, these shifts are often attributed to the subjectivity of the fee-paying higher education student now reconfigured as consumer (Price et al. 2011; Naidoo & Williams, 2015; Pusey, 2016), indeed as debtor. In this context, vying for funds (McDonnell, 2014), 'customer' satisfaction, and cultural validation, Arts Education must be seen to offer "value for money", and as such, currently faces increased scrutiny for the "realism" of the world view and employment and remuneration opportunities it affords its graduands.

Considering these tensions in the roles and expectations of the Art and Design sector of education, it is especially interesting to examine the position

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[4] For a detailed breakdown of this agenda of renewal of fiscal performance through knowledge-based economics, see Ivan-Ungureanu & Marcu, 2006.

[5] As described by Sharon Hodgson Labour MP for Washington and Sunderland West in a 2014 UK parliamentary debate on the Select Committee on Culture, Media and Sport's report, see Anon, 2014.

in which the theoretical elements of these degrees have found themselves in recent decades. Variously referred to as critical, or cultural, or contextual studies, these project focus upon developing undergraduates' critical and reflective faculties. This has the effect of diverting some timetabling and resources away from the primary vocational and practical learning indicated by the title of the degree, and thus in a climate of heightening emphasis on employability, theory assignments' pedagogic value, as a potential threat to engagement and thus competitive metrics, are contentions. This outline of the ideological aetiology of the social and political appreciation, or otherwise, of Arts education has made the role of theory increasingly precarious. This element inside the already highly contested field of Arts education has become a bugbear to be restructured, emaciated, audited and even embedded and blended into other projects so as to render theory innocuous and non-threatening to the commercial interests of Arts institutions. The current frenzy over "critical thinking" being one of the top ten qualities sought in graduands by employers may yet effect a recuperation of theory proper, but that is a discussion for a different context.

The Coldstream reports[6] are seen as the foundation for the standardization of a theoretical aspect to Art and Design undergraduate study in the UK[7]. Learners are expected to engage with teaching and assignments, usually in written form, designed to provoke reflection upon their visual practice, critically inform subsequent visual work and explore social and cultural implications of their professional practice (Grove-White, 2003). Few would disagree that this, at a basic level, summarises the vast majority of art and design students' experiences of the intentions and outcomes of what is sometimes referred to as their complementary studies' (Lord et al, 2009). However, regarding the ideological structure, delivery and assessment there is much variation in ethos and practice across the sector. Raein (*s.d.,* 2003*)* and Wood (2000) have been strident in pointing to antagonistic pedagogic tensions between the teaching of skills-based practical course elements[8] and the 'Humanities' techniques used to teach the theoretical elements. Pritchard et al (2005) called this attitude

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[6] Agendas embodied in two government reports, the Coldstream reports 1960 and 1970, aimed at academic integrity through standardizing and professionalising arts teaching and learning (Kill, s.d.; Lord et al, 2009) during a period of arts pedagogy characterised by Thistlewood as devoted 'to individual creative development' (1981).

[7] The Quality Assurance Agency undertakes benchmarking activities at regular intervals to update sector guidance. http://www.qaa.ac.uk/en/Publications/Documents/SBS-Art-and-Design-17.pdf

[8] Often referred to as 'studio practice' in Arts universities.

a 'widely held assumption'. To account for this incompatibility, Raein cites Coldstream as enforcing this split at a time when there existed no practicable teaching model for developing artists' and designers' written expression. Melles and Lockheart cite Art and Design's short history within higher education as the cause of these contested academic literacies (2012). On the other hand, building undergraduates' visual literacy alongside practical projects is a more favourable way of interpreting the value and intention of theoretical course elements (Hetland et al, 2007; Sandell, 2009). Similarly, historical and theoretical strategies can be seen as refining practice (Malins & Gray, 1995) and McKenna sees a process of creative thinking informing practice (1999.

So we have seen the kinds of educational motivations and criteria emerging with primacy from Arts education's close engagement with neoliberal entrepreneurial principles. We have charted how they build upon existing tensions regarding the 'incursion' of academic modes of thinking upon visual or vocational skills. Now we will consider the position of disability and inclusivity in these debates, in terms of a variety of models of understanding and providing for SpLDs learners. This is especially meaningful considering the challenges faced by SpLD undergraduates 'in an ever-changing knowledge economy' (Isgate, 2017).

3. From disability to neurodiversity via dyslexia

Given this fraught context, the ideological background to understanding disability in Art and Design education in the UK is worth exploring before moving on to specific problematics facing the teaching and learning of theoretical components within Art and Design undergraduates. Broadly speaking, the social and cultural functions of Art and Design education have historically been variously criticised as conformist (Thistlewood, 1981), as socially and aesthetically elitist[9], and as serving an indulgent hobbyist function (Steers, 1989) which are consequently ill at ease with issues of both employability and inclusivity. As such, the dismantling of elitism was one of the drivers of the extensive 'widening participation' programme to increase the diversity of the makeup of the higher education student body across all areas, during the 1990s and 2000s. Widening participation has been usefully described as 'measures to increase the number of students in higher education

[9] Interestingly, STEM has faced the same accusation, see Watermeyer, 2013.

from groups that have historically been under-represented in the sector' (Preece, 2010). In particular, the United Kingdom's Disability Discrimination Acts of 1995 and 2005, 'together with a political agenda to widen participation' (Bacon & Bennett, 2013) succeeded in welcoming individuals from diverse educational backgrounds and academic-orientations (Williams et al. 2014), to undergraduate study, including those with 'learning disabilities' as was termed at this time (HESA, 2011; HESA, 2012). Furthermore, the 2014 Equality Act expressly refers to specific learning difficulties, as is the current terminology, including dyslexia, in its definition of disabilities for which 'reasonable adjustments' must be made as a statutory duty by educational institutions (Holgate, 2015), including the provision of learning support assistants [10] at higher education institutions.

It is useful to briefly examine shifts in the representation of dyslexia, understood as a SpLD, in particular [11]. Prior to 1993, gaining entry to, and successfully engaging with, Higher Education was not a possibility for dyslexic people (Griffin & Pollack, 2009; Pollak, 2009) due to admissions procedures, lack of support systems for reading and writing assignments, and the reliance upon these as 'high stakes [...] text-intensive' techniques of assessment of learning (Williams et al, 2014: 614). The sequential and chronological systems therein are cited as barriers for dyslexic people by Hewlett, who examines the hegemonic consequences of this exclusionary gatekeeping to argue for the high value of dyslexia as a culture of its own, and the progressive contribution of this culture to wider society (2017). This is significant considering that dyslexia is 'typically characterised' by a mismatch in the expected literacy skills associated with 'age and intellectual ability' (Bacon & Bennett, 2013: 1). Key to this paper's argument about the potentials of re-imagining the pedagogic complexities of teaching theoretical assignments is Holgate's examination of the extent of this lack of correlation between students' intelligence and 'heterogenous manifestations of dyslexia' (2015: 89). Within the longitudinal academic and professional investigation and diagnosis of dyslexia, a feature that is particularly interesting to the present context is the focus upon understandings and expectations of the differences between an individual's level

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[10] For more detail on the complexity of this role in the current climate see Waywell, 2017.
[11] A related SpLD is Specific Language Impairment (SLI) delayed onset in speech, the discussion of which is outside of the present context's agenda, please see Alloway et al, 2017 for an illuminating comparison of the cognitive profiles of SLI and dyslexia.

of intelligence and difficulties with the written word; a considerable discrepancy comes under scrutiny as a sign of dyslexia[12]. Early definitions of dyslexia have come under criticism because they failed to provide inclusionary criteria for identification, they functioned as definition by exclusion (Rutter, 1982). For example, in 1968 the World Federation of Neurology proposed dyslexia as a 'disorder of reading in the presence of average intelligence, conventional instruction, and socioeconomic status' (Critchley, 1970). Whereas, contemporary understandings have developed empirically to encompass a more sophisticated model of deficit in the 'phonological component of language' that is 'unexpected in relation to other cognitive abilities' (Lyon et al, 2003)[13]. These are features commonly agreed to be present in this condition in an environment of effective educational instruction. The aforementioned scholar Holgate's research is of particular value here because it exemplifies this discrepancy in the expected abilities based upon intelligence using results from one student's dyslexia assessment showing an 83 percentage point difference between verbal comprehension (88%) and processing speed (5%) indices. Additionally there was a 74 percentage point disparity between perceptual reasoning (92%) and working memory (18%). On this basis of the mathemagenic activity imbalances, Holgate posits that dyslexic students will be absolutely capable of extended critical thinking, however evidencing this in traditional academic outputs will be the barrier (2015). He elaborates the posited capabilities as higher level 'critical synthesis' of research and verbal argumentation as evidenced in 'exceptional design and presentation skills' (2015 :89). In terms of Arts education, this should be understood as the ability to locate, interpret and use relevant critical research towards the generation of salient and innovative concepts fulfilling the brief of a project. Additionally extended critical thinking involves the synthesis of this research into the student's contextual understanding of the contribution, or lack therein, of their project work to the historical shifts and theoretical arguments of their discipline. This can be charted diachronically or synchronically, but either way critical ability will be evidenced through a mode of holistic understanding of the student's own position as a reflective (novice) practitioner (Schon, 1983)

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[12] Discussion of the precise meaning of considerable difference here, in contradistinction to a similarity that would constitute a neurotypical individual, falls beyond the remit of this paper, for further details please see Lyon et al, 2003.

[13] Fletcher is at pains to point out that the 2003 definition from the International Dyslexia Association makes no reference to intelligence quotient or socioeconomic status. However it should be noted that much of the literature does refer to intelligence as a marker for comparisons involved in diagnosis.

Holgate's observation of the possibility of capability mismatches echoes Gardner's theory of multiple intelligences (2004) which sought to posit the educational implications of the organisation of human abilities that run counter to intuitions about intelligence. The above described manifestations of dyslexia have been theorised as unrelated to socioeconomic status (Fletcher, 2009); neurobiological, and genetic loci have been replicated in several studies (Grigorenko & Naples, 2009; Pennington, 2009). More precisely, at the time this body of research aimed to relate genetic areas with poor reading, and although several regions and candidate genes were scrutinised, no major effects resulting from gene were identifiable; later research understands dyslexia as one of a number of polygenic reading and speech disorders. This has the implication that 'multiple genetic variants' will determine the modification of language processing (Gruen in Pollard, 2017: 8). Indeed, Fletcher posited 'a heritable component that accounts for about 50–80% of the variance in reading outcomes' (2009). However, since dyslexia is also highly shaped by environmental factors (Fletcher et al, 2007; Samuelsson, et al, 2007; Pollard, 2017) it is important to have in mind a substantive account of this SpLD to better understand the position within which the dyslexic student body finds itself in the Arts education context, and how this might be shifted through the adoption of a neurodiverse pedagogy.

The portmanteau neurodiversity describes an attitude to human learning and 'disability' that seeks to hegemonically establish the normalcy of variations in neurology resulting from genetic differences. This term concerns an approach to neurological differences that goes far beyond mere toleration, it respects and indeed highly values difference (Armstrong, 2017: 11) rather than interpreting difference as indicative of a deficit, in comparison to a perceived norm, or standard, of people in that community, or environment. Several neurodiversity studies cite Blume's 1998 article Neurodiversity, On the neurological underpinnings of geekdom, in *The Atlantic* (Robertson & Ne'eman, 2008; Silberman, 2015; Baum et al, 2017) as an early definition of neurodiversity in comparison to the 'neurologically typical' (NT) (1998). Blume provided a lively account of the confident emergence of self-advocacy groups organized by neurodiverse individuals. This social emphasis of neurodiversity is further highlighted by recent research charting the parallels of the Autistic Self Advocacy network with intersectionality theory and Black Lives Matter campaigns, (Strand, 2017). Succinctly put, neurodiversity is about socially appreciating a variety of types of brain (Pollak, 2009) including autism,

bipolarity, dyslexia and other neurotypes. The literature on neurodiversity has developed since Blume's argument across several disciplines to further define and debate neurodiversities, theorise and better appreciate the experiences of a diverse group of people who elsewhere might be understood as autistic, or 'suffering from' ADHD, or learning disabilities such as dyslexia or dyspraxia. It is debatable as to whether the advocacy of neurodiverse frameworks should be seen as part of the movement towards embodied or affirmative models of disability or vice versa. For example, Tomlinson and Newman's research with autistic writers adopt neurodiverse approaches to focus on 'autism as a part of human experience and values adaptive techniques, as opposed to dwelling on a cure for ASD[14]' (2017: 91).

Dyslexia can be interpreted as a neurodiversity, and amongst its many pedagogic investigations over the decades, a small number of research studies on higher education pedagogy have expressly approached it as such. These respectively consider learners' experiences of the deficit or the difference view (Pollak & Griffin, 2009; Pollak, 2009); dyslexia as an extraordinary gift (Armstrong, 2010; Armstrong, 2012); and learners' resilience and coping strategies (Wilson & Savery, 2012).

The specific relevance of exploring dyslexia for this paper's focus on the potentials of neurodiversity for Art and Design education must be outlined. From the late 1990s onwards, research charts the high proportions of dyslexic students in art departments, for example, 30% in a well-respected London specialist arts college (Steffert, 1999), and increased percentages in art departments of non-specialist Higher Education institutions (Wolff & Lundberg, 2002; Rankin et al, 2007). Cole found that 12%-14% of Art and Design higher education students are dyslexic (2008). Often, in recent research, the label 'less-academically able' is used to avoid more contentious and pedagogically-consequential designations of dyslexia, dyspraxia and other SpLDs. In particular, as this paper makes central, recent work on SpLDs has foregrounded a framework of alternative models of disability, through the lens of neurodiversity. In general, research has also emphasised the historic association of so-called 'less-academic' students with Arts education (Bacon & Bennett, 2013; Holgate, 2015). They are skills-tracked towards Art and Design subjects from primary, secondary, and tertiary educational stages, by maybe kindly and well-intentioned instructors, based on assumptions that Arts degrees

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[14] Autistic Spectrum Disorder.

will be more inclusive towards their needs since these qualifications are viewed as requiring fewer, and shorter, written assessments. Indeed, ideologically, it has been the SpLD student body's perceived lacunae and assumed needs, according to the deficit or medical models (DfES, 2004 ; Pollak & Griffin, 2009) and the social model of disability (Durham & Ramcharan, 2018), which have informed managerialist, governance and quality assurance efforts towards scrutinising the fitness for purpose of the more intellectually challenging components of art and design degrees; that is, theoretically driven written assignments.

The specific SpLD student body's alternative mode of interpreting and experiencing the world can be theorised using an 'embodied ontology' (Shakespeare & Watson, 2001; Shakespeare, 2006; Durham & Ramcharan, 2018), as opposed to the deficit model. Embodied ontology argues against qualitative, or hierarchical, differences between 'disabled and non-disabled people because we are all impaired in some form, some more than others' (Shakespeare & Watson, 2001: 27). Such an interpretation would seem to go beyond mere inclusivity/tolerance to adopt an actively celebratory position towards the contributions and identities of the student body. In fact, the closely related affirmative model of disability (Martin, 2012) precisely foregrounds the value of the uniqueness of so-called 'disabled' individuals' abilities (Levitt, 2017) as a source of socially- and personally-validating 'positive identity' (Swain & French, 2000) and pride (Lang, 2007).

As such, the critical perspective fundamentally undergirding these embodied and affirmative approaches has potential for 'actively repudiating the dominant view of normality' (Swain & French, 2000), in a similar vein to queer theory's antinormative stance. Indeed, the disability activist Taylor imagines and instantiates the shape of this ontological and epistemological revolution in her discussion with Butler in the documentary *The Examined Life* (2010) provoking Butler to reflect 'Maybe we have a false idea [...] that the able-bodied person is somehow radically self-sufficient.' (2010)[15].

To marry up the above arguments to the dynamics of the current UK arts sector, the outlined constitution of the student body, and governance ideologies established earlier, foster a keen interest in the literature for investigating and ameliorating the perceived exclusionary impacts/potentials of Arts and Design curricula for SpLD and neurotypical learners, in terms of hegemonic aesthetic canons (Alexander, 1995; Seltzer-Kelly, 2010), prescriptive assessment

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[15] From the point of view of embodied interdependence, this conversation is usefully analysed by Abrams.

requirements/criteria (Miles & Rainbird, 2005; Rintoul, 2014; Brown, 2015), and, of particular interest, the structure and delivery of course theoretical elements (Baek & Shin, 2008; Raein, *s.d.*). This section has argued, from various angles, that neurodiversity provides a better account of disability in the social environment. The next section will illustrate the fruitfulness of the framework of agentic neurodiversity, by considering two major perceived problematics of teaching and learning theoretical components at art and design undergraduate level.

4. Adopting a neurodiverse framework to address familiar issues within the teaching of theoretical components

4.1. Alienation from writing: students' perceived incompatible identities.

Multiple literatures argue that art, design and 'creative' undergraduates, and that neurodiverse undergraduates more generally (Gerstle & Walsh, 2011; Wills, 2011), experience some anxiety and disengagement (Gute & Gute, 2008) towards the traditional academic aspects of their degree, completing the written work with difficulty. Approaching the pedagogy of these issues through the neurodiversity framework has potential for improving damaging self-perceptions of the student's identity/ability as incompatible with academic identities and abilities (Brueggermann et al, 2001; Tomlinson & Newman, 2017). By pedagogically interpreting dyslexic students, and others working with cognitive features thus far described as SpLDs, from within a neurodiverse framework, it becomes possible to embrace and account for difference at a more fundamental level. The flexibility of such a pedagogy brings to mind the curricular principles of Universal Design for Learning (UDL) which aims to give all individuals equal opportunities to learn (Griful-Freixenet at al, 2017) and in so doing calls into question the usefulness and effects of 'study skills' or 'reasonable adjustments' that are accessed as services by those students in need of extra teaching. Combined with a neurodiverse outlook, the three principles of UDL[16]) have potential for relieving stigma for all students. Neurodiversity is aligned with the 'celebration of different ways of being human' (Baker, 2011) so the intentionality of a pedagogy along these lines would quite radically reshape educational institutions and their learning activities not just at the level of design

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[16] multiple means of representation, of actions, and of engagement (Tomlinson & Newman, 2017).

and assessment requirements but also in terms of existential, social and political aims.

Pedagogic theorists of writing and composition note the potential for engagement with these activities 'widening a rift between [the student] and their home cultures' (Heaney, 2006; Preece, 2010). According to the neurodiverse ideology, all learners' overall quality of life and subjective well-being is taken into consideration in curricular design, so, for example, opportunities to talk about, visualize and otherwise curate representations of home cultures would be built into learning activities to avoid the risk of reinforcing separations between expectations of learners' identities. Indeed, cultural environments are crucial to understandings of the neurodiverse and the neurotypical (Blume, 1998), a neurological tendency may be castigated as disabling in one cultural setting but be unremarked upon or appreciated as advantageous in another (Grinkler, 2007). This neurodiverse model judges differences between learners as expressions of that individual's own self-constructed functional learning culture, and as resulting from interactions between the learner and the educational programme and its delivery, as opposed to positioning them hierarchically in a category.

4.2. Perceived Antagonisms of 'visual' and written skills

A similar risk of separation of identities occurs when art, design and 'creative' students are variously characterized as visual learners (West, 1997; Coffield et al, 2004), or less-academic; even in less focused pedagogic research there is a tendency to see a schism between academic and creative aptitudes (Onwuegbuzie, 1999). At a fundamental level, these discourses enforce a specious separation between the creative and the written which is unrecognized in most other educational spheres. This unhelpful separation would be effectively addressed and ameliorated through adoption of neurodiversity as a guiding principle of institutional policy, as the acknowledgement of 'differences in brains as an element of diversity within societies' (Baker, 2011), and the considerations that flow from this acknowledgement. Better understanding of the complexity of the interactions between learners' neurological uniqueness and educational environments can succeed in deconstructing inherited problematics and posing fundamental questions about the assumptions underlying the splits in art and design instruction. By the same token that diversity in ethnicity, sexual orientation, religious faith and other aspects of identity have been accorded affirmation, neurodiversity advocates the same

recognition and celebration of people 'embodying diverse human neurology' (Robertson & Ne'eman, 2008).

The constructions of visual and theoretical epistemologies described above are deployed as explanations for students' lack of ability or interest in the theoretical aspects of their degree because these are most often assessed summatively through written tasks (Francis, 2009). There is an inherent belief in the art and design education community that writing is a less "visual" form of expression of ideas, thus less "creative", and so will be less enthusiastically embraced by learners. Indeed, much curricular documentation and course structure are apriori set up in this vein, so recursively reinforcing these beliefs. This body of research might be interpreted as focusing upon the *written* as if it is somehow constitutive of the content of theoretical knowledge itself, a point also questioned by Gardner (2004) in terms of the exclusive use of traditional literacy as the only marker of intellectual ability and thus academic success. The pedagogic arguments therein should be qualified somewhat, with a more holistic understanding of these educational contexts' subtly; although writing is often prescribed as the preferred form in which to summatively evidence learning during theory projects (Francis 2009), much formative feedback is shared with learners upon observation of a much wider variety of activities. Indeed verbal formative and summative assessment requirements, and less formally written outputs, are gaining ground (Knight & Yorke, 2003) because verbalized assessment formats may be more conducive to the expression of intellectual abilities than the written. Nevertheless, there apparently remains a somewhat steadfast belief in the pedagogic value and status of learning to write in an academic style (Pritchard et al, 2005), and a student's learning being assessed *through* formal writing tasks, amongst Art and Design educators. This inflexibility may be understood through the 'literary bias of traditional grammar' which evolved from Western grammarians' desire to preserve the currency of classical Greek texts (Lyons, 1978:18).

Seen from within a curricular structure that encourages instrumentality and somewhat surface learning about the form of outputs as opposed to content, the above dynamics effectively model for students the value they should place upon the production of a traditional academic style in their written work.

5. Conclusion

In this discussion, it has been argued that the schisms and problematics of the

teaching, learning, and especially assessment, of academic writing components in Art and Design higher education, derive from historical processes aiming to form an academic discipline. This establishes that it is these structural, inherited, features of the culture of this educational sector, especially academic writing practices, which shape the ways its current participants interpret the role of critical thinking, and their own abilities towards this aim, and not the cognitive capabilities of students themselves. To support this argument, a robust literature has been presented and analysed to instantiate the agendas of professionalization, diversification and inclusion that the teaching of these subjects has had to mediate between. Dyslexic students' represent a particular case of the barriers to academic success that continue for those in the student body who are the least enabled by the current deficit and social models of disability. Despite the successes of the widening participation agenda, neurodiversity has not yet been adopted as a fundamental framework for a more responsive understanding of the uniqueness and potentials of learners in a creative field. This investigation has advocated for some renewal in approaches with the view that 'the aim of teaching is simple: it is to make student learning possible' (Ramsden, 1996: 13). However, there are doubtless many more opportunities

The approach therein has been to dissolve, rather than attempt to solve, problems taken as axiomatic in the socially-responsible teaching of social-reflective art and design practitioners. It is hoped that the adoption of neurodiverse principle in Arts education might usher in lines of questioning towards presupposed beliefs about how learners' time and attention should be divided into art and design instruction.

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