Dyslexia And Design

a discussion of the role and impact of dyslexia in creative design students

Paris Suzanne Van-Loo

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Introduction

The link between artistic talent and dyslexia has become increasingly evident in recent research, which begs the question; why is more not being done within the design community to help encourage the development of art and design students with dyslexia?

Dyslexia is classed as a 'Specific Learning Difficulty' (SpLD) and is often grouped with a number of associated learning difficulties such as Dyspraxia, Dyscalculia, Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) (Goodwin, 2004). Whilst this whole range of SpLD's exist within the creative industries, it has not been possible to encompass the full spectrum due to the limitations of this essay. However, the importance of other disabilities and their relevance to these design issues has been taken into account whilst compiling this investigation. Equally, the matter of dyslexia in design can be applied to other contexts such as children in early education, the elderly and adults in non-creative industries. Unfortunately it has not been possible to incorporate all aspects of this topic. The demographic selected for this essay are design students with dyslexia who into the future will be the driving force behind innovation within the creative field.

This essay will begin by explaining the various characteristics of dyslexia and the way in which cognitive processing differs between dyslexic and non-dyslexic minds. Furthermore, the alternative learning styles and techniques which dyslexics require in order to read, write and to learn new information will be explored. It will then investigate how dyslexia has an impact upon the experiences of creative design students throughout higher education and their prospective careers.

Current social perceptions of dyslexia will be questioned, with regard to awareness and understanding of the condition. The encouragement and support of positive role models will be contrasted with the negative attitudes that hinder dyslexic people. This argument put forward will include support from previous studies; (Geschwind, 1982), (Kirk et al, 2001) as well as, first-hand testimonials from people who have struggled with the issues outlined in the BBC Three programme 'Don't Call Me Stupid' (2010). The essay will also discuss misconceptions linked with dyslexia, referencing 'Gardner's Theory of Multiple Intelligence' (1983) to suggest that the visual and spatial aptitudes dyslexics' have do no coincide with society's perception of intelligence.

An analysis will take place questioning the responsibilities owed by designers to contribute valuable and accessible design to the wider community. This discussion will consider the significant numbers of dyslexic students and the potential for these young designers to use first-hand experience to contribute design for a dyslexic audience. This section will also reflect upon an investigation into the effect that the American Disabilities Act (ADA) had upon design for public spaces (Busch, 1990).

A review of existing examples of design, which have been specifically developed for people with dyslexia, will also be explored, alongside design for a general audience. Included within this discussion will be, Typography; bespoke typefaces that have been designed specifically for dyslexic readers such as, 'Sylexiad, A Typeface for the Dyslexic Adult Reader' by Dr Robert Hillier, 2006. Web Design; the development of the British Dyslexia Association's website by Leonie Wharton, 2009 A study of the academic website 'Studynet' at the University of Hertfordshire for the use of dyslexic and non-dyslexic students (Appendices 2-3). Interactive Media; an examination of the role of new media and assistive technology, evaluating products that have been designed specifically to assist those affected by dyslexia, as well as products designed for the general population that also have a beneficial value to dyslexics. Furthermore, it will consider the practical uses of interactive technology within education and the potential role it could play in the future careers of creative dyslexics.

To conclude the issues previously addressed, a review of work that has achieved successful design for dyslexic use will be highlighted. Furthermore, it will expose the areas within graphic design which remain undeveloped in regards to dyslexia. A series of suggestions and potential solutions based upon these findings will be highlighted and vindicated.

Not only will this essay be drawing upon the personal experience of a graphic design student with dyslexia, but it will also reference first-hand testimonials from other design students and practicing designers who have dyslexia.

Dyslexia

Chapter 1

Dyslexia is a form of specific learning difficulty (SpLD), which encompasses a wide spectrum of traits. . As stated in 'Understanding specific learning difficulties' a person with a SpLD will have "an IQ score greater than 80, and deficits in at least one area of academic achievement (reading, spelling, mathematics), associated with specific cognitive impairments (such as short term memory problems, poor auditory discrimination ability, visual-perceptual problems, and the like)" (Prior 1996). It can be difficult, to assign a concise definition to dyslexia due to the diverse nature of the condition presenting itself in numerous ways and varying in intensity in each individual.

Considerations must be made when making a single statement or summary to describe dyslexia to avoid misrepresenting the complexities of the condition. The British Dyslexia Association (BDA) has collated a list of descriptions to portray the various ways in which dyslexia may emerge, as illustrated in Figure 1. In addition, the BDA ascertains that dyslexics can exhibit strengths in areas, such as 'design, problem solving, creative skills, interactive skills and oral skills', reinforcing the link between dyslexia and the creative design community. The possible benefits and applications of these strengths will be discussed in further detail throughout the following chapters of this essay.

- 'Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling.
- Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed.
- Dyslexia occurs across the range of intellectual abilities.
- It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points.
- Co-occurring difficulties may be seen in aspects of language, motor co-ordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of dyslexia.
- A good indication of the severity and persistence of dyslexic difficulties can be gained by examining how the individual responds or has responded to well founded intervention.'

Figure 1.

Social Perceptions

Chapter 2

Awareness of the symptoms and knowledge of dyslexia in the wider community has grown substantially in recent years. Many dyslexic organisations now encourage the recognition of both historical and contemporary figures that have achieved outstanding success despite their dyslexia. The likes of Albert Einstein, Leonardo Da Vinci, Steve Jobs and Richard Branson have made a significant contribution to society and are strong role models to young dyslexics who may question their abilities in a society that favours the qualities of left-brain intelligence.

Keane states, "The fact that dyslexics have some weaknesses means that their right brain strengths are amplified because they find they have to over compensate in order to compete in the left brained world." (Keane, 2011) This statement indicates an inherent problem within society, whereby a bias exists in favour of left brained thinkers and by extension, 'left brained' skills, such as logic, linear thinking and verbal skills. This puts dyslexics at a disadvantage as they have a stronger capacity for 'right brained' skills, such as visual expression, synthesis, intuitive and holistic thinking (please see Appendix 1). In order to balance the prospect for both of these groups to succeed it is imperative that society values both sets of skills equally particularly in education, work and competitive situations.

In an investigation into the advantages and disadvantages of dyslexia, Geschwind points out "an increasing number of studies have pointed out that many dyslexics have superior talents in certain areas of non-verbal skill, such as art" (Geschwind 1982). Statements such as this are incredibly valuable in supporting and boosting the aspirations of young dyslexics, unfortunately this kind of support is not always available. Social stigma, prejudice and discrimination are examples of some of the issues that affect people with disabilities and can have a detrimental impact on all aspects of their lives, including self-confidence, academic and personal achievements.

As dyslexia can be particularly challenging to identify, the symptoms can often be misinterpreted by various sectors of the community who do not have a full understanding of the condition. Dyslexic people may be wrongly labelled as 'stupid' or 'lazy', and in some cases can channel their frustration into delinquent behaviour. This helps mark the importance of understanding dyslexia and supports the idea that early diagnosis and correct support is crucial in shaping a young dyslexic person's future potential (Kirk & Reid, 2001).

In the documentary 'Don't Call Me Stupid' Kara Tointon explored her own experiences with dyslexia. Kara met with a series of experts and other dyslexics in order to better understand her own condition. During an interview, a young dyslexic man recounts his memories of school; "When it comes to reading and writing, I just couldn't do it at all, like am I thick or what? . . . It was so embarrassing" Michael, who left school at an early age without the ability to read or write, was unable to hold down a job and turned to crime. He spent time in prison and it was only then that the Probation Service recognised his symptoms and tested him for dyslexia. Since being given adequate support, Michael now has prospects of gaining a job and re-integrating back into society.

Dyslexics are more commonly confronted with situations whereby they are made to feel 'stupid', 'thick', 'lazy' or 'unfocused'. During her documentary Kara Tointon recalls being dismissed by her teachers; "- You should have been listening Kara!' The teachers thought I wasn't paying attention when I was paying one hundred percent attention". In response to unsympathetic behaviour such as this, many dyslexics could develop introverted coping strategies that may not be beneficial to their learning needs. By internalising these problems, it is likely that they will experience heightened anxiety levels, low self-esteem and a loss of confidence (Ranaldi, 2003). These negative emotions widely prevent young people from realising their full potential throughout their education and working lives.

The discrepancy between intelligence and specific skills is a key characteristic of dyslexia and often leads to academic underachievement regardless of ones IQ level. (Farmer et al. 2002) This draws attention to flaws in the educational curriculum, which put dyslexic students at a disadvantage throughout the academic testing process. Dr Beverly Seffert's study of creative students with dyslexia at Central St Martin's College of Art and Design, 1996, noted that the "educational system is based on words, books and lectures and this has shaped our whole idea of intelligence" It is this very perception of academic intelligence being measured through word or memory alone, that has placed dyslexics at a disadvantage in the education process. These values, which have been instilled into the education system, support a single form of intelligence that does not take into account the alternative ways in which the dyslexic mind works. Howard Gardner (1983) proposed a theory suggesting that there are eight types of intelligence. The ways in which these intelligences apply to dyslexic students in the design industry are illustrated in Figure 2.

Many studies into dyslexia have indentified that the dyslexic minds possess significant aptitudes toward visual-spatial skills. However, many dyslexics fail to recognise these abilities within themselves, perhaps this could be due to a lack of understanding of their condition or low self-esteem. Thomas West, author of 'In The Mind's Eye', 1999, who is a dyslexic himself, believes that there are realms of dyslexic intelligence that have yet to be explored; "There is a whole new field of intelligence we just haven't discovered among dyslexics who see the world visually – who will lead the field in areas such as art, computer graphics and design.” This statement implies that dyslexia is a gift, as opposed to a disability, a notion that should be embraced by society and particularly by dyslexics.

With this in mind the higher education curriculum should consider implementing strategies that better accommodate the wants and needs of dyslexic students in order to create a more versatile learning environment that promotes the equal ability of both right and left-learning dominated individuals as opposed to the inherently left-learning dominated model that is widely used to the detriment of dyslexic students currently. This is particularly important in areas where the ratio of dyslexic students is of a higher than average percentile i.e. Art & Design Schools, Colleges and creative courses.

Table 3.1 Gardner's 8 intelligences of the individual

Intelligence type	Characteristics	Craft & Design strengths for dyslexic learners
Visual/spatial intelligence	Puzzle-building, understanding charts and graphs, sketching, painting, creating visual metaphors and analogies (perhaps through the visual arts), manipulating images, constructing, designing practical objects, interpreting visual images	Designing and producing a folio. Designing new concepts
Verbal/linguistic intelligence	Listening, speaking, writing, explaining	Explaining concepts or answers to questions without writing them down
Logical/ mathematical intelligence	Ability to use reason, logic and numbers, performing complex mathematical calculations, working with geometric shapes	Working drawings. Design concepts. This is particularly applicable to Technological Studies
Bodily/ kinaesthetic intelligence	These learners express themselves through movement. Experiencing the physical process of a task enables them to remember and process information	Hands-on experience of practical tasks will provide excellent ways to remember manufacturing processes
Musical/ rhythmic intelligence	Whistling, playing musical instruments, recognising tonal patterns, composing music, remembering melodies, understanding the structure and rhythm of music	When memorising information the use of a poem/rap to do this can help jog the memory in an exam, e.g. a rhyme about the parts on a metal lathe
Interpersonal intelligence	Seeing things from other perspectives (dual-perspective), cooperating with groups, noticing people's moods, motivations and intentions	Designing for specific target markets
Intrapersonal intelligence	These learners try to understand their inner feelings, strengths and weaknesses	Evaluating products, reviewing the specification and the quality of work
Naturalistic intelligence	Studying in a natural setting, learning about how things work. Categorising, preservation and conservation	An affinity with materials. Curious minds for constructional work

Figure 2. Gardner's 8 Intelligences

Design Responsibilities

Chapter 3

Upon gathering this mounting evidence it is apparent that a dilemma exists, whereby an improvement of design for dyslexia is required. However, whose responsibility is it to do this?

Dyslexia organisations appear to be restricted by the boundaries of psychological research. Educational bodies are regulated by a curriculum and are often met with obstacles regarding funding, government support and ethical issues. In many ways, it would be logical to look toward the design industry, which has a significantly higher percentage of dyslexic members in comparison to the rest of the population. Most likely, dyslexics would be designing for dyslexics, as they would be able to utilise personal experience and understanding, they would also possess the specific skills to resolve such visual problems and design issues to accommodate the needs of a dyslexic audience. Furthermore, design students and recent graduates would be of most value to this as they are able to draw upon current experiences, adding the most relevant and contemporary knowledge to this field.

There is increasing evidence to validate the theory that a higher than average percentage of creative students have dyslexia. A study conducted by Ranaldi, 2002, demonstrated that "61 per cent of students who were diagnosed as dyslexic…had chosen to take practical and creative subjects". This significantly high instance of dyslexia among creative students could be seen as an opportunity to develop effective, user-oriented design for a dyslexic audience. The designers would be able to use their own first-hand experience to inform their work with a full understanding for the user needs. Practical examples of this hypothesis will be outlined and evaluated in the chapter 'Design for Dyslexia'.

In response to the legislation 'Americans with Disabilities Act' (ADA), 1990, designer Richard Poulin points out "not enough designers have taken professional or social responsibility". The legislation informed the design of the signage for disabled people, forcing environmental designers across the breadth of America to reconsider their approach to visual, wayfinding, spatial, and interior and architectural design. Despite an initial backlash of irritation and scepticism, this new set of guidelines spawned a number of positive reactions and development in the area of design for disabilities (Busch, 1995).

Architect and designer, Roger Whitehouse reflects on the impact that the ADA imposed on his design values; "I began to be aware of how much designers have really failed to consider users' needs—not just the needs of the disabled, but all of our needs" (Whitehouse in Busch, 1990). It is evident that Whitehouse's career has been shaped by the ADA legislation, not only due to a legal obligation, but also through his realisation of the greater value of accessible design to the community.

Enforcing a law upon design is a drastic and divisive step, which may cause controversy within the design community. Although, it may be that similarly radical steps are what is required to launch significant progress in design for dyslexia.

Design for Dyslexia

Chapter 4

For a dyslexic student it can often be difficult to find alternative resources or tools that have been designed to accommodate their specific learning needs. Tasks such as reading course material, making lecture notes, organising self-directed study, researching and writing essays can all act as notable obstacles in the daily life of a dyslexic student. Despite developing various personal coping strategies, these difficulties may impede dyslexic individuals, leading to a negative impact on their overall educational experience. With some consideration, the tools and interfaces used to perform these tasks can be re-designed in a way that responds to their visual and multi-sensory needs. This chapter will explore various studies and designs that have endeavoured to achieve this. The strengths, weaknesses and potential for wider applications of such designs will be examined and possibilities for further development in these areas will be considered.

Style Guides

The BDA devised a 'Dyslexia Style Guide', with very similar intentions. It includes a series of recommendations for 'dyslexia friendly text', 'accessible formats' and finally 'website design'. The style guide presents a standardised set of rules and advice on how to compose the media, font, layout, colour, formatting and web design. Although this notion of having a standardised set of rules could provide a strong reference point for designers, it must not be too restrictive or limit creative licence, but provide accurate and relevant advice.

Media	Avoid white backgrounds for paper, computer and visual aids (instead use cream or a soft pastel colour)
Font	Use a plain, evenly spaced sans serif font such as Arial and Comic Sans. (Alternatives include Verdana, Tahoma, Century Gothic, Trebuchet).
Headings/ Emphasis	: Avoid underlining and italics, use bold instead. AVOID TEXT IN BLOCK CAPITALS. Use boxes and borders for emphasis.
Layout	Use left justified with ragged right edge. Avoid narrow columns. Line spacing of 1.5. Use bullet points and numbering rather than continuous prose.
Writing Style	Short simple sentences. Avoid double negatives. Use flow charts, lists, pictograms and graphics to help locate information.

(Dyslexia Style Guide, www.bdadyslexia.org.uk)

The advice offered by the BDA Dyslexia Style Guide to create 'Dyslexia Friendly Text' can be seen in the table below. Guides for developing 'Accessible Formats' and Website Design are also available.

The Dyslexia Style Guide continues to note further considerations such as, checking readability, accessible formats, and web design. Although many of the contributions found in this document are valuable, it is invariably not without flaws, as some further studies have suggested. 'Sylexiad, A Typeface for the Adult Dyslexic Reader' by Dr. Robert Hillier, (2006) a study to develop a bespoke typeface for dyslexics questions the typefaces put forward by the BDA Style Guide. Dr. Hillier's research ventures for the first time into testing and designing a font specifically for a dyslexic audience. He argues that the typefaces proposed by the BDA "were designed by non-dyslexic designers for a non-dyslexic audience" and therefore deems them inappropriate for the use of 'dyslexic friendly' design.

Furthermore, his findings conclude, "it is the combination of spacing, weight and overall form of a typeface that is important rather than individual letterform design". (Hillier, 2006)

Hillier's results place credence over the arrangement of text rather than the typeface itself; "new typographic rules concerning legibility for dyslexic readers need to be considered". This in-depth study not only highlights the absence of thorough pre-existing research into understanding dyslexia, it also exposes the inconsistent advice given by dyslexia organisations, contesting that the recommendations are "too specific and unhelpful". These issues will be explored in further detail in the following section of this chapter.

Typography

One of the most widely recognised symptoms of dyslexia is difficulty with reading. It would, therefore, be appropriate to look toward a typographical solution to help aid or overcome this difficulty. Dr. Robert Hillier's investigation into legibility and readability (as cited in chapter four) lead to the production of a range of new typefaces designed specifically to accommodate the needs of the dyslexic reader. The typeface 'Sylexiad' was created through the 'developmental typeface testing' method. This means that the design was directly informed by the results of summative and formative testing, including questionnaires, interviews and observation of dyslexic and non-dyslexic readers. "None of the typefaces recommended by these dyslexia organisations were ever designed specifically for the dyslexic reader". (Hillier 2006) Hillier's study suggests that, for dyslexics, the most preferable of all the typeface forms tested was the Serif Sylexiad. Despite being singled out as the most suitable typeface, Sylexiad is not considered to be the only practical solution available. The study places more importance upon the typographic characteristics, such as layout and formatting. These features can therefore be manipulated to produce better legibility and readability when using other typefaces. His findings identified that the typographic characteristics favoured by dyslexic readers were uppercase forms, long ascenders and descenders, handwritten style, lightweight, uniform strokes and generous spacing.

There is a conflict between the findings of Hillier's investigation and the typographic advice given by The BDA. While some of the typographic principles support Hillier's findings, such as, recommending that dyslexic readers use lowercase rather than capital letters, the BDA contradicts other maxims, for example, advocating the use of sans-serif fonts, particularly Arial. Hillier's report states " These recommendations are too specific and unhelpful. I think that broader recommendations concerning typographic characteristics would be more appropriate for dyslexic readers than simply specific fonts… new typographic rules concerning legibility for dyslexic readers will need to be considered". Hillier proposes that a set of 'new typographic rules' should remain 'broad'. A justification for this proposal may be that a broad set of adaptable guidelines corresponds with the variable nature of dyslexia itself, this can in turn will accommodate the entire spectrum of dyslexic needs.

Figure 3 shows the types of distortion that a dyslexic may experience when reading text (following page).

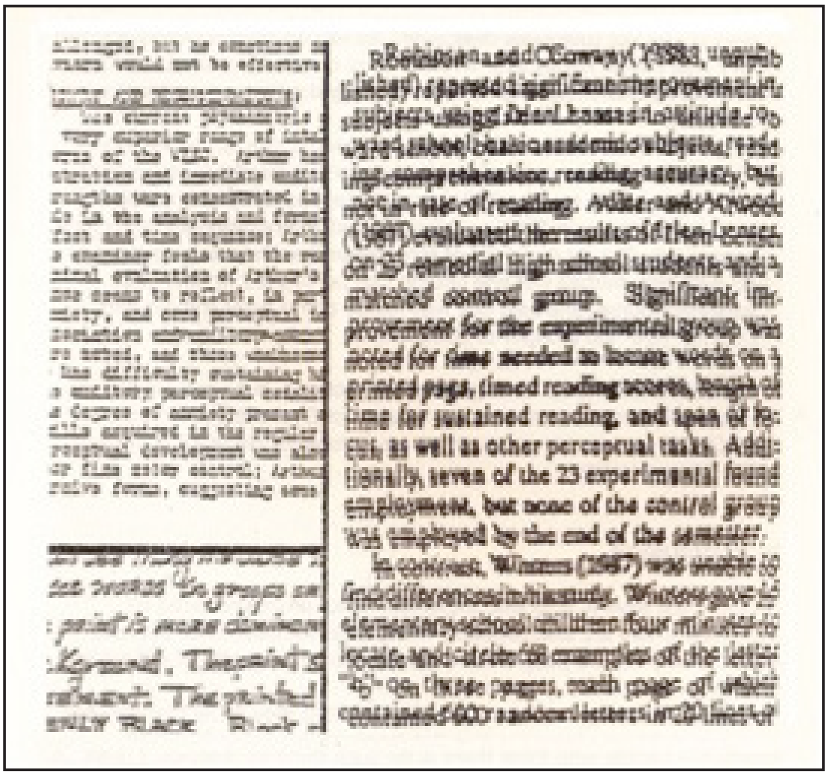

Figure 3.

Web Design

The Internet has become an increasingly vital tool, more so for students, than arguably any other facet of society. Students in recent years have come to rely on the Internet for almost every aspect of their work, including skill development, research and communication. Surely such an interactive, instantaneous and visual interface would be the ideal format for the dyslexic user? However, there are many reasons as to why this is not the case. The visual layout, organisation of content, site navigation and many other components of web design contribute to the overall user experience, which is often not targeted at a dyslexic user. This passage will discuss the visual aspects of website design as well as the interactive experience in order to evaluate which features dyslexics may be sensitive to, and which features they may find more advantageous.

Graphic Designer, Leonie Wharton re-designed the website for The BDA – www.bdadyslexia.org.uk. Wharton described the challenges she faced in an online blog whilst creating the web design. "Legibility guidelines for dyslexia often conflict with usability conventions for website. My challenge was to find a way of designing a website that adhered to both sets of rules". Wharton began by using Steve Krug's book on web usability 'Don't Make me Think' (2000) to inform her initial approach to this project. However, upon developing a deeper understanding of the BDA's design objective, she was forced to reconsider the visual elements of the website. Wharton describes the reasoning behind her design decisions in her blog. These considerations lead her to assume the underpinning directive 'Less is more', as outlined below in Figure 4. Usability Versus Dyslexia.

Paragraphs – Keeping paragraphs short and to a minimum helps with both dyslexia and usability.
Leading – Having dyslexia means that things can get jumbled more easily. Increasing the leading (width of white space between lines) will help to separate each line from the next, making finding your way from the end of one line and to the beginning of the next much easier.
Typography – Minimum text size is even more important here, sticking to 12pt or even perhaps 13pt is a must.
Links – try to emphasise these without underlining them – one way to do this is by having arrows leading towards click-able items.
Colour – we used colour strongly throughout the design as a means of clearly dividing up the sections and also keeping cohesion when linking through to inner pages.
Less is more – no fancy backgrounds or additional elements that are not absolutely necessary.
A combination of all these elements helped us to generate a clear and successful design that the client and hopefully the users will love.

Figure 4. Usability Versus Dyslexia.

A principal design issue that is debated frequently in the field of design is that of form over function. In design for dyslexia it is imperative that the 'function' or practical aspects are prioritised over the 'form' or style. In this circumstance, Wharton questioned the client's reasoning behind using the 'dated' cream background. However, the rationale for using a cream background is that it helps to improve legibility of black text by 'softening the glare'. To non-dyslexic readers the colour scheme may influence their feelings or opinions towards the appearance of the site, whereas for dyslexic readers it supplies assistance, thus improving the user experience by enhancing readability.

Figure 5. BDA Homepage Design (www.bdadyslexia.org.)

Many of the key visual solutions that Wharton has imposed upon the design of the BDA's website can be seen on their homepage as shown in figure 5. The site has been divided into nine sub-sections in order to make the content easier to navigate. Each section has been assigned a different colour creating consistency throughout the inner pages making them easier to identify and separate. The use of imagery helps to illustrate and reinforce the meaning of each section of the website. The text is set to 12pt and the leading (line spacing) has been maximised creating space between the words and letters in order to prevent letters becoming jumbled, helping to ensure effective readability. The typeface used throughout the website is Arial, a recommended typefaces by the BDA's Style Guide. Although the typographic principles presented by the BDA were disputed earlier in this essay, it remains consistent with its own values and therefore may be deemed appropriate.

In addition to The BDA, there are a considerable number of other dyslexia organisations that have a presence on the Internet providing advice and support to the vast dyslexic community. Similarly to the BDA website, a comparable design ethic should be applied to the rest of these sites, which associate themselves with dyslexia. Unfortunately, many of these sites fail to demonstrate the same considerations and in turn fail to accommodate the wants and needs of their primary users. Ignoring these key elements can have a detrimental effect on the user experience according to the design principles put forward by the BDA.

In response to the work of Leonie Wharton, a further investigation into the affects of web design on the dyslexic user was carried out with design students and staff at the University of Hertfordshire, (appendices 2–3). The study gathered personal responses and opinions in a qualitative survey, to analyse the user experience of the University's academic web resource site 'Studynet'. The survey was distributed to both dyslexic and non-dyslexic students and staff from the Creative Arts and Design department in November 2011. The main objectives of the survey was to gather responses in regards to the overall visual qualities of the site, in order to develop an understanding of the user experience, and finally to ascertain their outlook on what they believe to be favourable web design for academic use.

The findings of the survey revealed a combination of positive and negative feedback. A minority of users found the Studynet website 'easy to use' in comparison to a ninety percent majority who find the overall usability of the website either 'moderate' or 'difficult' to use. This highlights a reasonable concern that the site is not currently achieving a high level of positive user experience.

Upon further examination, the survey showed the following; when asked to describe the sites, the top responses were somewhat contradictory, indicating that the site is both 'beneficial' and 'unattractive'. The second two most popular responses were also opposing, stating that the site is both 'helpful & supportive' and 'inconsistent'. This suggests that despite providing useful and beneficial information on the site, the presentation of this content has not been executed effectively. When examining the elements that make up the overall 'look' of the website (colour, text and layout) no significant trends were found in relation to the current colour scheme and text. On the other hand, a prevalent response to the layout suggested that the majority of users found it was 'too confusing' and 'too busy'. Again, the areas of concern appear to be related to the organisation of information as opposed to the content.

This qualitative survey encouraged open, descriptive responses to the questions posed, in order for the participants to express their views, and make their own suggestions as to how they would prefer their academic website to look and/or behave. The following quotes are example of the suggestions made in this section of the survey:

"…it would be far more engaging if illustrations were used"
"…uses colour to link each topic together "
"Perhaps a more customisable version where you can move modules (of the site) around so that the most relevant part is the first thing you see."
"…to show /hide tabs that aren't useful"
"…clean and simple…. Making sure everything has a colour theme"
"…subtle designs and expands within sections when relevant to you"

Collated responses generated a number of trends showing that Google, Facebook, blogs and creative websites as the most frequently used sites for academic purposes. Features that can be found in these websites have also been put forward as ways to improve the Studynet site; 'simple', 'clean', 'clear', 'easy to use', 'uncluttered', 'coloured themes' 'images/illustrations' and 'customisation'.

It may seem appropriate at this point to suggest that a minimalist approach should be imposed on the Studynet website, emulating the 'look and feel' of a more popular website, such as Google. However, it is important to consider that the range of results also included users that were not affected by the design of the site and were satisfied with its current performance. In order to appeal to the needs of the diverse target groups within the university community without disrupting the experience of those who are content with its current design, it would be appropriate to implement the concept of universal design (Dolan et al. 2001). One feature that would provide a fully accessible experience is customisation, as it allows the user to adapt the layout, appearance and functionality of the site to suit their specific needs or preferences. This helps to avoid a common problem for many websites, whereby the design does not accommodate all members of the target audience. To illustrate this point Dolan et al, 2001, uses an example of the conflict between the needs of children with different learning difficulties; "The same design that would likely engage a student with attention deficit hyperactivity disorder (a high degree of novelty and surprise, for example) would be absolutely terrifying (and thus disengaging) to a student with autism" This example refers to children with specific disorders whose reactions are more sensitive to that of people with no disabilities. Nevertheless, it is crucial that each individual's needs are considered unique– this is even more critical in the case of dyslexic needs.

With regards to the application of the Universal Design for Learning model to website design, Dolan et al, 2001, states that "Universal Design for Learning relies on the ability of new digital media, such as audio text, images, audio, video and networked environments". All of these features are currently readily available through the web, therefore providing an ideal platform upon which the website design of The University of Hertfordshire's academic site Studynet could be based. See Appendix 2 for a copy of the survey questions and spreadsheet of results.

The new generation of interactive media provides multiple platforms through which dyslexic people are able to excel. Advancements in the latest technologies now enable people to interact with information in a host of new and innovative ways, for example touch screen, 3D, virtual reality and voice recognition. These new methods assist some of the difficulties experienced by dyslexics namely, reading, writing and interpreting data. The availability of these technologies enable dyslexics to absorb information, learn new skills, express themselves and communicate faster, more efficiently and more accurately than ever before.

"The right brained mode of thinking is ideally suited for problem solving, intuitive and holistic thinking and quantum leaps in understanding: These are the very qualities that have aided humans to evolve into such technologically advanced beings" (Keane, 2011). This report explains that dyslexic minds are 'right brain dominant'. Skills which the right side of the brain are responsible for include visual memory, spatial awareness, pattern recognition, social skills, creativity, kinaesthetic skills, critical thinking and verbal skills, all of which are vital in managing the interactive nature of these new technologies.

Propelled by his own experiences as a dyslexic student, Professor Louis Rosenberg has used his aptitude for technology to help children in education throughout his career. Rosenberg, who teaches at California Polytechnic University, sets out to combine innovative technologies with learning environments. He developed the 'Center for Exhibit Design', a facility where the university students "create high-tech exhibits for the use of children's museums and learning institutions throughout California" (Ketchum, 2007). These exhibits feature simulations, underwater robotic cameras, motion sensors, solar power, and claymation among many others. Through these dynamic, practical and physical methods the children are able to develop critical math, logic, creative and thinking skills, while the students who design the exhibits gain highly valuable real-world experience (Ketchum, 2007).

Rosenberg's work has achieved success on a number of levels; primarily recognising those alternative educational tools can benefit students through a multi-sensory learning method. Secondly, it provides university students with real-life design challenges that are relevant and practical to their prospective professions. Finally, Rosenberg has drawn upon his personal experiences with dyslexia to advance in a career dedicated to assist people to learn via the use of technology.

The application of new media in the educational environment could be the key for dyslexic students. These technologies could help them overcome barriers in reading, writing and self-expression that prevent them from reaching their full potential not only in school, but also as they venture in to their chosen careers.

In a large scale study at Boston College it was established that "students allowed to use a keyboard to answer writing portions of the test scored significantly higher than those students required to use pencil and paper" (Burk, 1999). In recent years, it has become commonplace for students to compose essays on a computer as opposed to writing them. As a result students are more adept to generating their work digitally in a faster and more efficient way. Moreover, the various tools available on computers help to detect spelling and grammar mistakes, selection of fonts, size and layout. These tools are particularly useful to dyslexics who struggle to formulate their work as accurately as their non-dyslexic counterparts.

For dyslexics, the advantages of digital technology do not end at writing- it extends as far as language, communication, visual thinking, planning, organisation and the potential for innovation and creativity. In his book 'In The Minds Eye' Thomas G. West, 1999, explores creativity in visual thinkers with learning difficulties, such as dyslexia. He challenges the conventions of intelligence and investigates new horizons for human interaction with computer visualisation technologies of the future. West proposed that "powerful interaction will be possible between people and machines at levels and in modes not possible before' (West, 1991). His prediction of the budding relationship between man and machine has undoubtedly been realised and for dyslexics this relationship is more significant than ever. It is at this point of co-existence that our interaction with technology should be scrutinised. It is important not to change our learning methods or strategies to comply with the format of technology, rather technology should be adapted and designed to support our needs. Despite the highly developed and rapidly evolving nature of new media available today, it is evident that the design of user interfaces has not been able to remain consistent with this growth. It is therefore the responsibility of the designer, manufacturer and programmer to create a user-oriented system (West, 1991).

Conclusion

The main objective of this dissertation has been to explore the effects of dyslexia on creative students in higher education in view of academic development and thus, how it can impact on their future career path. The range of common traits and symptoms associated with dyslexia has been identified, and it has been established that these traits vary hugely in nature and intensity in each individual.

The evaluation of social attitudes towards dyslexia has identified that an increasing number of positive dyslexic role models have emerged in recent years in the form of historical and contemporary public figures. Despite these recent endorsements, it seems evident that much work is yet to be done before society will completely understand and embrace this condition. Kirk and Reid's, 2001 study found that the failure to diagnose and support young people with dyslexia could result in low self-worth, academic failure and in some cases delinquency. It has also been established that society tends to favour 'left-brained' skills over 'right-brained' skills (Keane, 2011.) placing dyslexics who are right-brain dominant at a disadvantage in both educational and professional environments. Gardner's Eight Intelligences model illustrated in figure 2 validates these alternative approaches to thinking by linking them directly to the specific strengths essential to design. It is these skills that enable dyslexics to view the world in a different way, which allow them to excel in creativity and innovative thinking. Such traits in young creative designers that will encourage the next generation of pioneering design in the future.

The question of responsibility has been raised to determine who might best be suitable to lead the development of design for dyslexia. Due to the high incidence of dyslexia amongst creative students, according to Ranaldi, 2002, it is evident that dyslexic design students are the best candidates to enhance the quality of accessible design using the advantage of personal experience, and recently developed skills. The implementation of the American Disabilities Act, 1990 encouraged designers such as Poulin and Whitehouse to reconsider their approach to design. Consequently the legislation generated vast developments in environmental design for people with disabilities. Although enforcing legal obligation upon designers may not be a realistic solution, awareness could be raised through accessibility driven briefs for dyslexia. This could employ young designers to consider alternative ways to develop user-oriented design.

Conflicting advice regarding design principles for dyslexia has been outlined, contrasting the BDA's Style Guide and the findings of Dr. Rob Hillier's study into typefaces for the dyslexic reader. Despite the development and success of the bespoke typeface Sylexiad, Hillier established that the underlying design principles (concerning formatting and layout) are superfluous to the typeface itself. Although, Hillier's design principles may not coincide with those of the BDA, there is a consensus that the implementation of a set of carefully selected design principles can be used to help designers to create more accessible design.

The Internet provides open access for a vast community to share and access information. In regards to this it has become evident that design for the web must consider an equally vast audience and despite the nature of the product or information provided websites must demonstrate accessibility to all. Leonie Wharton's design of the BDA's website demonstrated the challenges and conflicts that can occur when designing for the web. The dyslexia guidelines provided by the BDA challenged her existing knowledge of usability and web design principles. As a result, Wharton had to take into account both approaches in order to accommodate all audiences, adopting an over all 'less is more approach'. The evaluation of academic website Studynet, revealed a high level of inconsistency in responses regarding issues and preferences of the sites design and usability. Considering the user base of students and staff of varying age, discipline and ability, the level of satisfaction with the website varied widely according to the needs of each user. This reinforces the notion that web design must provide accessibility for all audiences, which has lead to the consideration of Universal Design. The principles of the 'Universal Design for Learning' model by Dolan et al, 2001, have been offered as a basis to re-develop the design approach of Studynet.

In light of current and future developments in technology, a view to the impact of interactive media has identified new dynamic platforms for dyslexics and creative thinkers to excel. Through formats such as touch screen, audio text, 3D and the facility for personalisation, the intrinsic skills common to dyslexic thinkers are increasingly being catered to. Although the majority of these new technologies have not been developed specifically for the dyslexic user they, nevertheless accommodate their multisensory needs i.e. visual, audio and kinaesthetic. Moreover, it could be suggested that these devices will prompt the need for universal design.

It seems apparent that there is potential for the dyslexic community to excel further than ever before within the realms of creativity. By embracing their visual and spatial intelligence, and utilising new technology there is limitless potential for innovation and success.

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Appendices

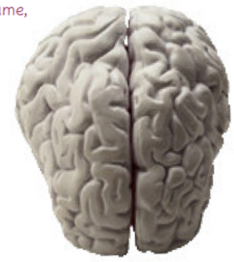
Appendix 1. Understanding Dyslexia and Dyspraxia (2011) University Of Hull Disability Services, pp. 4, 9, 11, 13

iii *The Different Functions of the Two Brain Halves*

The left and right hemispheres of the brain specialise in different tasks – people with dyslexic and dyspraxia are typically thought of as being more 'right brain dominant'. Consequently, they do certain tasks better than left brain dominant people.

what the **left brain** does best . . .

Linear progression: looks at the 'particular' and thinks sequentially, step-by-step, a to b to c
Working with facts
Explaining with words – uses language to name, describe, define
Remembering using language
Controlling emotions,
Taking life seriously
Structured activities
Organisation
Knows 'how'
Thinks in signs
Analysis - looks for cause and effect, breaks things down
Logical reasoning – deductive, draws conclusions through a logical progression from the 'general' to the 'particular'

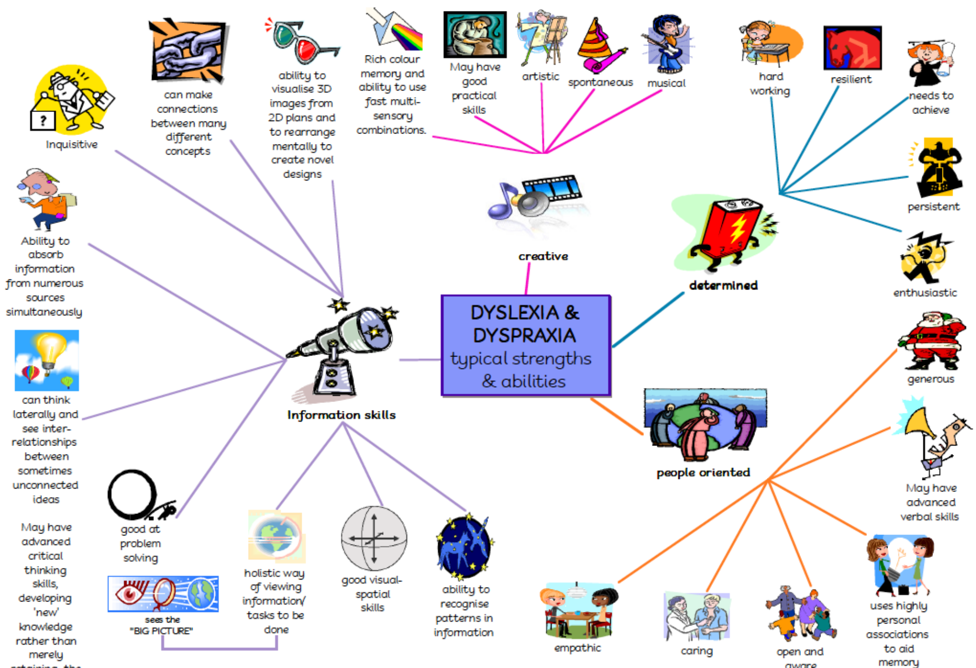


what the right brain does best . . .

Global approach: thinks holistically, looks to 'whole picture'.
Understands 'simultaneously' by making associations
Working with pictures
Explaining things visually – uses pictures, shapes and colour
Remembering using images
Expressing emotions,
Approaching life playfully
Fluid, open activities
Improvisation
Discovers 'what'
Thinks in designs
Synthesis – looks for inter-relationships and links
Intuitive understanding – inductive, draws conclusions from an intuitive basis and a variety of Sources

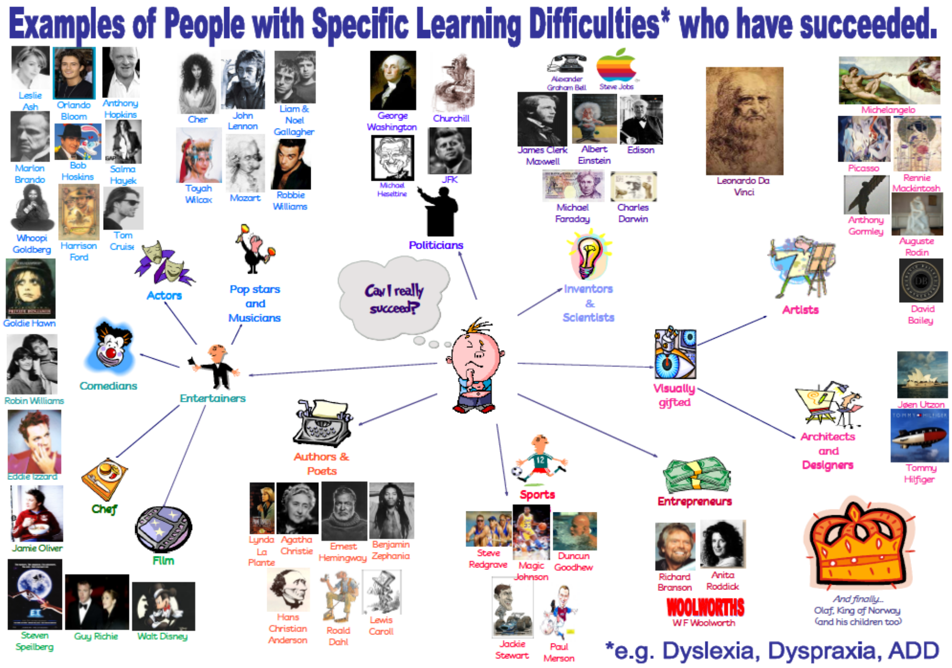
Produced by The University of Hull - Understanding Dyslexia and Dyspraxia - page 4

iv



Produced by The University of Hull - Understanding Dyslexia and Dyspraxia - page 9

iii



Produced by The University of Hull - Understanding Dyslexia and Dyspraxia - page 11

iv

Common Features Of The Dyslexic and Dyspraxic Learning Style

Holistic learning style	★ Uses a global approach to problem solving ★ Personalises learning ★ Uses individual props to aid understanding ★ Needs overview as a guide to learning right from the start ★ Struggles with sequential learning and tasks, especially in the absence of a big picture.
Intuitive thinker	★ This is part of the process of holistic thinking. The student 'knows' the answer through making associations using personal knowledge or thought, rather than a systematic working out
Strong visual-spatial thinker	★ Dyslexic and dyspraxic students can use a form of thought in which images are generated or recalled in the mind and manipulated, overlaid, translated, and associated with other similar forms. ★ They can be rotated, increased or reduced in size, distorted or otherwise transformed from one familiar image to another. ★ Responds to visual-spatial patterns, e.g. keyboard, their surroundings and mind maps
Concrete learner	★ Sometimes needs to feel materials before writing or reading about the topic or trying something out ★ Good at 'hands on' practical skills ★ Learns better from actively investigating a subject rather than passively sitting and hearing the information
Divergent thinker	★ Makes connections between many different concepts and can see the inter-relationship between sometimes apparently unconnected ideas
Inductive thinker	★ Learns from lots of experience and practice rather than generalisations and rules
Spatial thinker	★ Can use three dimensional space creatively

There are also many techniques that can be adopted in order to overcome many of the problems of dyslexia and dyspraxia; In the process you're likely to have a lot more fun learning and just be left the advantages. These are what we try to share with you at the groups.

Produced by The University of Hull - Understanding Dyslexia and Dyspraxia - page 13

Appendix 2. Studynet Survey Form (2011) University of Hertfordshire

Studynet Survey

What do you think about Studynet?

An opportunity to express your views and opinions on Hertfordshire University's internal website.

Please tick ALL the answers you agree with and help further by inputting your own ADDITIONAL COMMENTS.

*Required

Course

Year

How easy do you find Studynet to use? *

- ☐ Easy
- ☐ Moderate
- ☐ Difficult
- ☐ Impossible
- ☐ Other:

Which words best describe the site? *

Tick MULTIPLE boxes if appropriate. Please ADD your own comments.

- ☐ Beneficial
- ☐ Helpful & supportive
- ☐ Easy to use
- ☐ Reliable
- ☐ Useless
- ☐ Problematic
- ☐ Inconsistent
- ☐ Unattractive
- ☐ Difficult to use
- ☐ Other:

What words best describe your overall experience? *

Tick MULTIPLE boxes if appropriate. Please ADD your own comments.

- ☐ Enjoyable
- ☐ Interesting
- ☐ Insightful
- ☐ Frustrating
- ☐ Confusing
- ☐ Overwhelming
- ☐ Other:

What do you think of the colour scheme? *

Tick MULTIPLE boxes if appropriate. Please ADD your own comments.

- ☐ The colours are pleasant
- ☐ It does not affect my experience
- ☐ The colours clash
- ☐ Too bright
- ☐ Too dull
- ☐ Too many colours
- ☐ Other:

Appendix 2.

What do you think of the text? *

Please ADD your own comments.

- ☐ It does not affect my experience
- ☐ It could be better
- ☐ I like the font
- ☐ The text is too small
- ☐ The words/letters are too close together
- ☐ I find it hard to read
- ☐ Other:

What do you think of the general layout ? *

Please ADD your own comments.

- ☐ Well organised
- ☐ Good spacing
- ☐ Flows well
- ☐ Badly spaced out
- ☐ Confusing
- ☐ Too busy
- ☐ Other:

Usability *

Please tick the statements you agree with

- ☐ I use Studynet frequently, it is very informative and easy to use.
- ☐ I don't have any issues with Studynet, I use it when I need to.
- ☐ I don't use Studynet very often, but it is okay.
- ☐ I only use Studynet when I have to, but I find it frustrating / hard to use.
- ☐ I avoid using Studynet, I don't like it / don't understand how to use it.
- ☐ Other:

What would you like to see on Studynet? *

Tick MULTIPLE boxes if appropriate. Please ADD your own comments.

- ☐ Consistent style throughout the site.
- ☐ Different themes on pages according to content
- ☐ Information broken up into boxes/segments
- ☐ More imagery: icons, symbols, photos.
- ☐ More space: between features, lines
- ☐ Customise settings: colour scheme, font, layout
- ☐ Other:

What other websites do you use frequently in relation to your studies? *

If Studynet were to be re-designed in the style of another website which one would you chose? *

Please give a reason

Appendix 2.

Thank you very much for taking part in this survey.

My name is Paris Van-Loo, I am a third year Graphic Design student and I am conducting a survey on Studynet as research for my dissertation essay. The study will be exploring dyslexia in design. This survey on UH Studynet, aims to gather a better perspective of both the positive and negative experiences you have had with the website, as well as, your opinions on website design and interactive media in general. Thank you

Optional:

If you would like to disclose any learning difficulties / disabilities that you might have, it would be of great value to this investigation:

- None
- Dyslexia
- Other Learning Difficulty
- Other Mental/physical disability
- Other:

All additional comments and feedback will be very much appreciated and all responses will remain anonymous.

If you would like to add any further comments - or for more info please feel free to get in touch: paris.van-loo@hotmail.com

Submit

Appendix 3. Studynet Survey Spreadsheet of Results University of Hertfordshire, Van-Loo, P (2011)

(following 3 pages)

Timestamp	How easy do you find Studynet to use?	Which words best describe the site?	What words best describe your overall experience?	What do you think of the colour scheme?	What do you think of the text?	What do you think of the general layout ?	Usability	What would you like to see on Studynet?	What other websites do you use frequently in relation to your studies?	If Studynet were to be re-designed in the style of another website which one would you chose?	Thank you very much for taking part in this survey.	Optional:	All additional comments and feedback will be very much appreciated and all responses will remain anonymous.	Course	Year
	Moderate	Helpful & supportive, Inconsistent	Frustrating	The colours clash	The text is too small , The words/letters are too close together	Badly spaced out , Confusing, Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Information broken up into boxes/segments, More imagery: icons, symbols, photos.	Twitter, facebook, thecoolhunter.com	youtube	you are welcome	Dyslexia		Graphic Design	3
	Moderate	Beneficial , Inconsistent, Unattractive	Frustrating	It does not affect my experience	It does not affect my experience	Badly spaced out , Confusing	I only use Studynet when I have to, but I find it frustrating / hard to use.	Different themes on pages according to content , More imagery: icons, symbols, photos., Customise settings: colour scheme, font, layout	Google Twitter Youtube Blogs (i.e Yay!Everyday, The Die Line, Ffound, Its Nice That...)	If Studynet were to be redesigned in the style of another website, I would choose Topshop. All features are under separate categories and in those categories there are sub categories that relate to the subject. The site is user friendly making it, easy to navigate, the design style is attractive (fonts, colours, themes). I think that Studynet would benefit from the style because, although the Topshop website is related to fashion it's a brand that has a huge demographic of students and youngsters, the site has everything laid out in a way that will give the user a pleasurable experience from using the web service. Studynet needs this. Many times I've tried to use the site to retrieve information, that my lecturers have posted but end up becoming frustrated with the tedious search for it.		None		BA (Hons) Graphic Design	3
	Difficult	Difficult to use	Confusing	Too dull	It could be better	Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Different themes on pages according to content , Information broken up into boxes/segments, More space: between features, lines	Google Google scholar	Moodle Amazon		None		Tutor	N/A
	Difficult	Difficult to use	Confusing	Too dull	It could be better	Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Different themes on pages according to content , Information broken up into boxes/segments, More space: between features, lines	Google Google scholar	Moodle Amazon		None		Tutor	N/A
	Difficult	Beneficial , Problematic, Inconsistent, Unattractive	Frustrating, Confusing	It does not affect my experience	It does not affect my experience	Badly spaced out , Confusing	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Different themes on pages according to content , More imagery: icons, symbols, photos., Customise settings: colour scheme, font, layout	The Die Line World of Packaging Shellsuit Zombie It's Nice That Fffound Twitter YouTube	If Studynet were to redesign themselves in the style of another website I would choose Topshop. Although it is a website that is designed for another purpose (fashion), the layout and style of it would be beneficial to Studynet. This is because, a large demographic of Topshop's customers are students, they've laid out their service in a way that allows easy access and a user friendly experience. Everything is in a category and then sorted into a sub category. I feel that studynet has a 'slap- bang' style about it and, information has been posted up for the sake of being there. I think that Studynet would hugely benefit from symbols and icons as, not everybody has the same learning style. More imagery would be another feature that Studynet could take into account because, I feel that the site looks more like a chore than something that benefits or makes a student's studies enjoyable.		None		BA (Hons) Graphic Design	3
	Difficult	Beneficial , Helpful & supportive, Inconsistent, Unattractive	Frustrating	It does not affect my experience	It does not affect my experience	Good spacing, Flows well	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Different themes on pages according to content , Information broken up into boxes/segments	Google. Wikipedia. UH website.	BBC. Simple and easy to navigate.	Thanks	None	Thanks		
	Moderate	Helpful & supportive	Confusing	Too dull	It does not affect my experience	Confusing	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site.	google books, google scholar	facebook		None		Graphic Design and Illustration	2
	Moderate	Beneficial , Helpful & supportive, Problematic, Unattractive	more complicated than it needs to be.	It does not affect my experience, Too dull	It does not affect my experience , It could be better	Confusing, Too busy	I use StudyNet regularly, but I find it poorly designed - it is more complicated than it needs to be, and from an aesthetic point of view, it's not very attractive.	More imagery: icons, symbols, photos.	loads of design-related websites.	ycnonline.com		None		graphics & illustration	Program Leader
	Moderate	Beneficial , Inconsistent, Unattractive	Frustrating	The colours are pleasant	The text is too small , The words/letters are too close together	Badly spaced out , Confusing, Too busy	I use studynet all the time, but it seems to have changed this year and each course section is very hard to use. There is no seperation of information, there is a lot of information in one place and this makes it very hard to find what you are looking for...	Information broken up into boxes/segments, More space: between features, lines	I use blogs and sites like 'it's nice that' and 'creative review', as I am on a creative course.	Possibly like the layout of facebook..where headings are on the main page and then open up to reveal each section? This website is mainly uncluttered (besides some advertising) but it has clear headings and sections.		None		Graphic Design and Illustration	3rd
	Moderate	Difficult to use	Confusing	It does not affect my experience	It could be better	Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Different themes on pages according to content	Athens	http://www.nationalgeographic.com/ Clear, pictures associated to the content of each section. Type is nicely spaced out with bold headings.		None		Graphic Design and Illustration	Level 4

Moderate	Unattractive	fear	Too dull	it's alright	Badly spaced out , Too busy	I don't have any issues with Studynet, I use it when I need to.	something more simple and user friendly	athens, that's a good one i suppose.	the older versions of youtube when it was accessible and easy to use.		really mild dyslexia, my teacher in primary never picked up on it.		Graphic Design BA Honours	3rd
Moderate	Beneficial , Easy to use , Reliable, Problematic	Insightful, Frustrating	The colours are pleasant	I like the font	Flows well , Confusing	I use Studynet frequently, it is very informative and easy to use.	Different themes on pages according to content , More imagery: icons, symbols, photos., Customise settings: colour scheme, font, layout	Google, Google Scholar, Yahoo, Facebook (groups)	www.typographyserved.com OR www.behance.net Both using a similar style; it would be far more engaging if illustrations were used for each course almost giving them a brand identity. On these 2 sites, there is a lot of information but it is labelled clearly on the top navigation bar and down the column in an interesting way. The colour scheme on these two sites compliment each other well and is easy on the eyes. http://ycnonline.com/ This is another interesting site as has a lot of information but uses colour to link each topic together. Studynet could use this technique for a more interesting approach.		None	Hope this helps. Good luck Paris! :)	BA (Hons) Graphic Design	Level 5
Moderate	Reliable	Insightful	It does not affect my experience	It does not affect my experience	Flows well	I don't have any issues with Studynet, I use it when I need to.	More imagery: icons, symbols, photos.	nothing specific everyday its a new one i think	i would consider it to be the same because it took me an year to learn it and now cant afford to get use to another layout. thats my thinking, there could be many possibilities but none in my mind		None		BA (hons) graphics and illustration	2
Easy	Beneficial , Helpful & supportive, Easy to use , Inconsistent, It would be more reliable if tutors checked and updated it more regularly.	Useful.	The colours are pleasant , It does not affect my experience, The top bar is aesthetically pleasing.	It does not affect my experience , I like the font	Cluttered, sometimes troublesome to navigate, but effective.	I use Studynet frequently, it is very informative and easy to use., I don't have any issues with Studynet, I use it when I need to.	Different themes on pages according to content , More imagery: icons, symbols, photos., Customise settings: colour scheme, font, layout	uohmail.herts.ac.uk flickr.com google.co.uk	Although it's very buggy and has lots of issues, the only site I can think of that has an appropriate interface is Facebook. Perhaps a more customisable version where you can move modules (of the site) around so that the most relevant part is the first thing you see. E.g. if the course page was center-top, that would be better for me personally because that, PM, and email are the three things I check most often. Or if it was possible to show/hide certain tabs that aren't useful, and have them in a dropdown menu so they're less visible but still accessible. The main thing about Facebook is that it is in order of most recent posts first, and you can choose who you get updates from, as well as being able to upload your own content easily. These are the aspects of the site that I think would be most useful.		None		Graphic Design and Illustration	2
Easy	Beneficial , Helpful & supportive, Reliable	Interesting, Insightful	It does not affect my experience	It does not affect my experience , It could be better	Flows well	I use Studynet frequently, it is very informative and easy to use., I don't have any issues with Studynet, I use it when I need to.	Different themes on pages according to content	Probably not the best example but we have a group on Facebook for our course, so we all post interesting things on there to influence each other and sometimes if we need help its handy as people are frequently on Facebook via phone or computer and you can get feedback on work etc really quickly.	Hard decision, but maybe in the style of Pentagram's website, just because i like the scroll bar along the top moving across the page instead of the usual up and down.	No worries	None	Good Luck!	Graphic Design and Illustration	2
Difficult	Helpful & supportive, Inconsistent, Unattractive, Difficult to use	Insightful, Frustrating, Confusing	It does not affect my experience	It does not affect my experience	Badly spaced out , Confusing, Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	More imagery: icons, symbols, photos., More space: between features, lines , Customise settings: colour scheme, font, layout	n/a	studynet				BA (Hons) Graphic Design	2011/12
Moderate	Helpful & supportive, Problematic	Insightful	Too dull	It could be better	Confusing	I don't have any issues with Studynet, I use it when I need to.	More imagery: icons, symbols, photos., Customise settings: colour scheme, font, layout	I dont tend to use that many websites as i prefer to read magazines, but if i am researching a project for example i will look at alot of blogs of designers or creative people in general to help me form ideas for example: http://www.designproject.co.uk http://www.magpie-studio.com	I dont have a website as an example but i think a clean, simple, easy to use website would be great for students to use. Making sure everything has a colour theme so its easy to use and still visually pleasing. Also maybe a section where youcan save important documents that tutors upload so you dont have to search for it again?		None		Graphic Design and Illustration	2
Easy	Useless	Interesting	It does not affect my experience	I like the font	Good spacing	I use Studynet frequently, it is very informative and easy to use.	Consistent style throughout the site.	i have no idea	its nice the way it is				graphic design and illustration	4
Difficult	Beneficial , Inconsistent, Unattractive	Frustrating, Confusing	It does not affect my experience, Too dull	It does not affect my experience , It could be better	Badly spaced out , Confusing, Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site.	Facebook	Can't give a specific website, but studynet has many areas in which infromation can be stored and finding what you're looking for can be really hard sometimes, often causing you to look though many pages to find what you're looking for.	You're welcome			3D Animation	3rd year
Difficult	Problematic, Inconsistent, Difficult to use	Frustrating, Confusing, Overwhelming	It does not affect my experience	I find it hard to read	Badly spaced out , Confusing, Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Different themes on pages according to content , Information broken up into boxes/segments, Customise settings: colour scheme, font, layout	www.facebook.com, www.google.com, www.youtube.com	www.itslearning.com, http://www.designshard.com/inspiration/25-examples-of-clean-and-well-designed-web-sites/, http://prent.no/profilstip.html		Dyslexia		GDI	3
Moderate	Beneficial , Helpful & supportive, Reliable, Inconsistent, Unattractive	Interesting, Insightful, Overwhelming	Too dull	It could be better	Flows well , Badly spaced out , Confusing, Too busy	I use Studynet frequently, it is very informative and easy to use.	Consistent style throughout the site., More space: between features, lines , Customise settings: colour scheme, font, layout	Creative Review	Apple - The only one I can think of				Graphic Design	3

Moderate	Beneficial , Helpful & supportive, Unattractive	Interesting	It does not affect my experience	It does not affect my experience , It could be better	Well organised	I don't have any issues with Studynet, I use it when I need to.	More imagery: icons, symbols, photos.	none	daily mail		None		Graphic Design	3
Moderate, very difficult at first	Beneficial , Helpful & supportive	Interesting, Confusing, The site can be very confusing and frustrating when tutors don't post things in the right places	The colours are pleasant , Nice neutral environment	I don't expect anything else from an information site	It's ok.	I don't have any issues with Studynet, I use it when I need to. , Now I find the site very useful, I check it often and usually find the information I need	Consistent style throughout the site., Information broken up into boxes/segments	google	I can't think of any. Studynet is pretty unique		None		GD&I with Marketing	2nd
Moderate	Beneficial , Inconsistent, Unattractive	Interesting, Confusing	Too dull	I like the font	Too busy, need more clarity between illustration and Graphic Deign	I don't have any issues with Studynet, I use it when I need to.	Consistent style throughout the site., Information broken up into boxes/segments	Websites of Design Studios spoonfed.co.uk marketingweek.co.uk	pentagram.com It has intresting subtle designs and expands within sections when relevant to you.		None		Graphic Design with Marketing	2
Difficult	Problematic, Unattractive	Confusing	It does not affect my experience	It does not affect my experience	Confusing	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site.	Google Books and other google apps	Google. Because it's clear, clean and well organized.					
Moderate	Beneficial , Unattractive	Insightful	Too dull	It could be better , its boring	Badly spaced out , Confusing, Too busy	i use studynet frequently but its aesthetics are awful	Consistent style throughout the site., Information broken up into boxes/segments, More imagery: icons, symbols, photos.	google for a lot of research any other creative websites like behance	not sure what, but something more sophisticated and simplistic		None		GD and I	3
Difficult	Useless , Problematic, Inconsistent	Frustrating, Overwhelming	The colours are pleasant	It could be better , The words/letters are too close together	Confusing, Too busy	I don't use Studynet very often, but it is okay., I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site.	this one	na		None		GD& Illustration	3
Difficult	Beneficial , Problematic, Unattractive, Difficult to use	Frustrating, Confusing, Overwhelming	Too dull	I find it hard to read	Confusing	I only use Studynet when I have to, but I find it frustrating / hard to use., I avoid using Studynet, I don't like it / don't understand how to use it.	Different themes on pages according to content , Information broken up into boxes/segments, More imagery: icons, symbols, photos., More space: between features, lines , Customise settings: colour scheme, font, layout, make it easy to navigate pleaseee	none	something simple,clear,easy eg youtube		None		gd & i	1
Difficult	Problematic, Unattractive	Frustrating	It does not affect my experience	It could be better	Confusing	I only use Studynet when I have to, but I find it frustrating / hard to use.	More space: between features, lines	google	can't remember good example right now		None		Illustration	6
Moderate	Inconsistent, Unattractive	Frustrating	Too bright	It could be better , Too much text	Not good enough.	I use studynet frequently, but it is not easy to use.	Consistent style throughout the site., Information broken up into boxes/segments, More space: between features, lines	Google.com	This questionnaire presents information better than studynet, just saying.	Good luck!	Other Mental/physical disability		Graphic design	3d
Moderate	Beneficial , Helpful & supportive	Interesting, Confusing	It does not affect my experience, Too dull	It does not affect my experience	Good spacing	I don't have any issues with Studynet, I use it when I need to.	Different themes on pages according to content , More imagery: icons, symbols, photos.	www.google.com	not sure about this		Dyslexia		Graphic Design	3
Moderate	Inconsistent, Unattractive	Frustrating	Too dull	It does not affect my experience , It could be better	Confusing, Too busy	I only use Studynet when I have to, but I find it frustrating / hard to use.	Consistent style throughout the site., Different themes on pages according to content , Information broken up into boxes/segments, More imagery: icons, symbols, photos., More space: between features, lines	Tumblr, Deviantart, Conceptart.org, ImagineFX	Twitter..flow and links		None	Good luck!	GDI	5

Appendix 4.

Dr R. Hillier Telephone Interview
12th December 2011, Duration 24:15
I = Interviewer, Paris S. Van-Loo
R = Dr. Robert Hillier

I: My name is Paris Van-Loo, I am in my third year doing Graphic Design and I am writing my dissertation on Dyslexia and how design plays a part in aiding creative design students with dyslexia in higher education. I was put in contact with you through your colleague, Martin Devenney, in order to gather some further research into the subject area. You received an email prior to our conversation with a preview of the interview questions…

R: Actually, I much prefer to verbalise your answers rather than write them down, being dyslexic myself, when I'm given a long questionnaire I tend to be quite blunt in terms of giving answers so it might be a good idea having this phone call as it will give me a chance to expand on the answers in the questionnaire.

I: I am also going to be recording the conversation is this okay with you?

R: Yes

I: And will it be okay to use quotes from this conversation in my dissertation, citing you as a reference?

R: Yes, no problem.

I: Firstly, please could you outline your role and previous experience with dyslexia in your professional career.

R: My role here at Norwich University College of the Arts is quite broad, I teach on the Graphic Design programme here with the first years, but I also teach on the post-graduate Communication Design provision we've got here. I also teach to PHD level as well and one of my students at the moment is investigating the correlation between creativity and dyslexia.
My background in teaching has been going for about twenty years now, I started my teaching career at what was the Surrey Institute of Art & Design (now the University of the Creative Arts) as a Graphic Design tutor there. During the end of the 1990's there was a great interest in dyslexia in higher education. It was while I was in the Surrey Institute that I became interested in my students dyslexia. Also I had a strong suspicion that I was probably dyslexic myself because of my reading difficulties, being a very slow reader and just misinterpreting things. So my introduction to dyslexia was around 1999 at the surrey institute.
I realized when I was growing up, going to school, doing O-levels and A-levels, that I was very slow at reading, but dyslexia wasn't really recognised then. So I just thought I was a slow reader really, but as I started to learn more about the subject I had a strong suspicion that, that's what my issue was. As part of my research, one of the things I did was to get myself tested by an educational psychologist.

I: In terms of the wider Design Community and the Graphic Design Industry do you feel that there is much awareness of dyslexia among creative people?

R: I'm not sure in terms of the Design Industry, but I certainly know in terms of design education there is a real awareness of the subject now within higher education.
Although, it is an interesting question, whether or not the design industry is aware of the dyslexic reader out there and if they did, what would they do? There is a publishing company called Barrington Stokes, based in Edinburgh and they are one of the very few companies that design for dyslexia. They design books for children with specific learning difficulties such as dyslexia. They use a very clear typeface called Cecilia, which is printed on coloured paper rather than white paper as it prevents photopic sensitivity.
I think that the design industry is such that it might be changing. When I gave a paper at an international conference in Reykjavik in September about the Sylexia typeface and I had some feed back from one of the people in the audience. He was from Berkley University in California and he is going to doing a feature in an American Magazine called Communication Arts, about the subject you are touching on now. I think the issue is due out in a couple of months time. He is going to be talking about the different sorts of typefaces in the magazine. There is a guy called Christian Boer, who designed the 'Dyslexie' typeface, he is based in Holland. He might also be touching on Natasha French's 'Read Regular'.

But. as far as the industry is concerned I don't get the sense that there is a lot of interest out there yet, but things might change.

I: What motivated you to develop the typeface 'Sylexiad'?

R: It was quite a pragmatic reason on many levels, when I joined Norwich University one of the remits is that any academic member of staff must put forward a research proposal. So, at the time I was really interested in my student's dyslexia and I began to suspect that I was dyslexic myself so I really wanted to develop a typeface for the dyslexic reader. I knew that it had never been done before and when I had my interview I had a lot of very positive feedback, so I wanted really push it and develop it as an idea. It has become almost a full time thing at the moment it is really taking off.

I: Since you conducted the study and it has been used in various design work, as well as, for academic purposed at your institution, has it encouraged any other artists or designers to do similar work?

R: I know that here at NUCA, they have used it in the project briefs and I've had very positive feedback from students. A lot of students have expressed a preference for Sylexiad rather than say Arial. Sylexiad has been used by students and dyslexic organisations around the world, but I don't think I can tell you if other designers have been influence by Sylexiad.

I: Are there any other examples of design that you feel have contributed to helping a dyslexic audience?

R: There are things that I am interested in, like Typographic Legibility, whether or not its just for dyslexic or for general readers. I am interested in the idea of upper and lower case typography for extended text and using all Caps. When I was testing my typeface a lot of dyslexic readers were telling me that they actually prefer extended text and paragraphs set in all caps. I asked them why they felt that was the case and they said that "we often write in all caps", so I think there is some interesting research to do in the area. A lot of typographers would say traditionally that "extended text in all caps is a no-no", but I disagree.

I: In your opinion do you feel that there is any responsibility on designers to create work towards dyslexia or other learning difficulties and disabilities in general?

R: I think it's an area that's not been touched on, which is important and it is an untapped thing. Thinking about people who have visual disabilities for example, a typeface has been developed for people with impaired vision, called 'Tiresias'. I think this typeface is a really good example for design for disability. There is definitely scope there, but not every designer would want to do that.

I: Do you think that more information and emphasis on dyslexia is something that should be incorporated into higher education for design students?

R: I can only talk about how things operate here at NUCA, and there is a real sense of dyslexia awareness here, students get dyslexia support and they get extra time to develop contextual studies, such as dissertations. So, I think there is awareness in higher education of NUCA is anything to go by.

I think dyslexic students are the best people to help facilitate design for dyslexic readers, whereas, non-dyslexic readers might not be interested in that as such. For dyslexic designers, I think it's for them to start to develop the initiatives.

I: Finally, what developments would you like to see in the future, regarding dyslexia within design? Are there any hope or ambitions that you have?

R: I would like to pass the baton on to other designers. I think that the work that I have done is okay, it is far from perfect- there are things that I've touched on that are interesting, but there are other things that need to be pushed further and developed.

When I was doing my research I was testing against the dyslexia family fonts, developing my designs against things like Arial and Times New Roman, the fonts recommended by the dyslexia organizations. Now there are quite a few fonts on the market like 'Dyslexie', 'Sylexiad' and 'Read Regular', I thnk it would be really interesting to take those fonts any test them on a dyslexic audience and see whether or not they do work, and if the do work try and establish what are the things that make the work? If they don't work, then try and work out how they could be developed further. So that's what I'd like to see in terms of typography.

I: Thank you very much for your time.

Appendix 5.

Dr. Beverley Steffert Telephone Interview
13th December 2011, Duration 24:14mins
I = Interviewer, Paris S. Van-Loo
R = Dr. Beverley Steffert

I: What was it that encouraged you to start investigating the links between dyslexia and creative art students?

S: I'm quite interested in how specific learning styles, when they are extreme turn into learning difficulties. So, if you are looking at dyslexia these are people who think in a visual spatial way- thinking images rather than words, they are not all dyslexic but they tend to be. Dyslexics tend to be visual spatial thinkers and that gives their art a certain type of 3D ability. Whereas if you are looking at the opposite, someone good with words, the extreme of that would be Dyspraxic – a highly verbal person. We call it 'DCD' Developmental Coordination Difficulty.

Lets go back to the dyslexic dimension they tend to be visual spatial thinkers and good at 3D abilities so they can see thinks at multiple specters and that goves them a different type of artistic ability, I think. Although, we still have to say 'does having good 3D ability mean you're going to be creative?' I might just mean you can pack a suitcase better.

You could also say that 'Dyslexics learn creativity' I don't think that creativity necessarily is something that belongs to dyslexics – perhaps a certain type of creativity does, which is something I'd be very interested in exploring too. When I assisted at Central St. Martin's I did find the people who were ADD tended to like bright colourful themes and dyslexics tended to be on the sculpting and model making side. So that gave me massive clues about the different types of creativity that go into different types of art.

I: Did you have any personal motivation to get involved in this field?

S: Well, my son is dyslexic and I realised that I have a bright kid but he can't get anywhere in school.

I: Is this what motivated you to campaign for visual spatial tests to be done in schools?

S: That's right. For years I have been doing this and talking to these bright kids who tell me "I can't do anything", and I said "but you can draw", "well yes, but that's not schoolwork" so I say "well you can design".

I think that would be the best think I could do, because the visual spatial test put into all schools for all seven year olds for teachers to use so they can find out who is good at this. Of course most of them will tend to be the dyslexics and there are some lucky people who are visual spatial thinkers who are not dyslexic, but the bulk will be dyslexic. So my hope is, going through this whole motivational clearing, that the teachers and the child themselves can find out that they are good at something before they start questioning themselves because they'll fail at reading. It's something to hold on to and that might stop the whole downwards spiral of depression and self-doubt and so forth. Neil Alexander Passe has written the book 'Dyslexia and Creativity' that I wrote a chapter for. He has also done a recent one called 'Dyslexia and Depression: The Hidden Sorrow', in fact he gave a talk in Harrogate and I was nearly in tears!

I: Since the work you did at Central St. Martin's how has the information that you gathered been used to develop the support for creative dyslexic students?

S: That's a bit of a problem because it still hasn't changed. The thing I got most from that was that those students were so angry, they felt that they were being judged on their weaknesses. When they'd have month to do a project, they'd spend about three weeks doing the written work of the brief and five minutes at the end throwing a product together. Also, many of them used their family of friend to help write the briefs for them. I think that having such a fair proportion of the marks assigned to the written brief wasn't really fair so that was one of my recommendations. Because they want to be academically recognized universities they have to produce written work, which I think is ridiculous really!

That still seems to be the situation and hasn't changed much as far as I can see.

I: So would you say there is still room for improvement?

S: God yes.

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I: In order to make these improvements as you have suggested, who do you believe to be responsible for implementing these changes?

S: The people who give the marks – the examiners. Because they don't understand dyslexia, these examiners come in with a certain criteria that seem reasonable, until you realize that some people i.e. the dyslexics can't do it. They can't match those criteria so they should be judged on other criteria not their writing ability.

If you can't have a different criteria for assessing their performance would be to provide someone to help them with the brief. So they can go and say what they meant and someone else can help write it down and put it into good English and so forth.

I: Many dyslexics reach University level without having been diagnosed, do you have any advice or opinions on this matter?

S: I must say that that HE are now giving much more support and Universities tend to have a student support department with access to people who can assess them. But the trouble is that if those undiagnosed dyslexics don't go to get the support, they could suffer quite easily.

I: Are there any learning devices and assistive technologies that you would recommend?

S: I think all dyslexics get on with computers, any of the speech detection software is great, voice over on text, there is so much good stuff now that didn't exist five or ten years ago, so yeah technology is a great help. Converting the written word into auditory is great because dyslexics can listen very well, they just can't read at the same level.

I: There are many devices that have not been designed specifically for dyslexic use, do you think that these could also be beneficial?

S: Absolutely, and will encourage their 3D ability. I know that the game Tetris can be used to improve 3D ability although not particularly for dyslexics. So going on that I am sure that a lot of these Apps do improve 3D ability.

I: Do you believe that with practice and learning, dyslexics can improve their reading and writing skills?

S: Yes I do believe that because you know when something is hard you don't do it and the more you don't do it, the more you can't do it. So I think that is what happens to dyslexics, they'd rather get the information by visual means, which is fine but if exposed to text it eventually helps. It might not take away all the dyslexic sign. They have probably still got poor short-term working memory, but I think exposure to text essentially must add up to improving dyslexics ability to read even if they are slightly slower. They also probably don't spell or write as well but I am sure that exposure to text has helped adults improve remarkably.

Something I found out recently is that most dyslexics can read something on a Kindle that they can't read on a black and white page. So I am wondering why that is? It certainly doesn't reflect light but clearly the Kindle technology is different from the ink on the page. Some students have even stated that 'they couldn't read until they got Kindle'. So I really want to follow this up, I mean the only thing is that the ink technology is different and it doesn't reflect light, which I think might be one of the reasons. There are elements of photopic sensitivity, that is a type of visual dyslexia where you might have to wear coloured glasses to read things. Thins might have something to do with low levels of photopic sensitivity.

I: What kind of things would you like to see improved or developed in the future concerning creative students with dyslexia?

S: Finding out how many kids are visually spatially gifted and acknowledge that, because by the age of seven a dyslexic child looks around and sees that 'everyone else around is finding things so easy and I can't do it at all' so their immediate assumption is ' I must be stupid'. So if they could say to them selves 'everyone else can do this reading, but they can't do my design'. It protects them from the inevitable failure.

Dyslexics use their visual spatial ability and pattern seeking ability better than most so they often pick up on things, that they often think is intuition, but it is visual scanning that allows them to see things quicker than others. So in fact if you compare the typical profile of the art student with the profile of teachers I have found that the dyslexic art students tend to have okay verbal skills and vocabulary, below average working memory but hey had very good visual spatial skills. Now the teachers were a mirrored image of that, they had very good verbal skills, vocabulary and working memory but they were just average on the visual spatial skills.

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That I call, 'the sign mind versus the design mind'.
So the absolute mirror image in the peaks and troughs in the cognitive profile.
I: What kind of implication would that have in education and being taught?
S: The thing is you shouldn't judge these students on their ability to read and write words. It's not just reading that's the problem with dyslexics the problem seems to be also in writing ability.
I: Thank you very much for you time this conversation has been very useful.

Appendix 6.

Email

From: Rob Hillier <r.hillier@nuca.ac.uk>
To: p.van-loo@herts.ac.uk
Cc: katherine hewlett <hewlettk_uk@yahoo.com> , Martin Devenney <m.devenney@nuca.ac.uk>
Date: Wed, 12 Oct 2011 12:03:07 +0100
Subject: Re: Degree Essay: Design and Dyslexia

Dear Paris,
Thank you for your kind words about my research.
As well as Sylexiad (details on www.robsfonts.com), you may want to check out the fonts: Dyslexie http://www.fastcodesign.com/1664561/dyslexie-a-typeface-designed-to-help-dyslexics-read and Read Regular - http://www.readregular.com/

Interestingly, both of these fonts were designed by Dutch deigners - Read Regular by Natascha Frensch and Dyslexie by Christian Boer. You might wish to contact a PhD student I am supervising at the moment. Her name is Katherine Hewlett and she is investigating the relationship between dyslexia and visual creativity. She may be able to help you.
Her email is: hewlettk_uk@yahoo.com There is a chapter due to be published about my research at the end of the year in the book "Supporting Dyslexic Adults" edited by Nicola Brunswick and published by Wiley Blackwell. If this is published too late for the hand-in for your essay please find attached a transcript of of the paper I presented at the AtypI Conference in Reykjavik a few weeks ago.
I hope this helps and good luck with your essay.
Best wishes

Rob

Appendix 7.

Email

From: Brinley Clark <brinleyclark@yahoo.co.uk>
To: p.van-loo@herts.ac.uk
Date: 24/11/2011

Hi Paris, I've tired to answer your questions as good as possible and I hope they are all yousefull.
When and where did you discover you had dyslexia? (school, college, parents, work)
I discovered I had it when I was at secondary school (My parents both can read but not write)
Did you receive any additional/specialist help throughout school, college, University for your dyslexia? (If so please state
My secondary school didn't offer me any additional help, only college and University did
Do you know of any specialist help/support provided for dyslexics in the

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workplace (in the design industry)?
Not to my understanding I don't
Can you give an example of when dyslexia has ever held you back / put you at a disadvantage to other designers at work?
When I'm putting presentations together, when I was on placements I would miss spell words and forget punctuation. Which does make you feel slightly dumb when other designers point it out.
Can you give an example of when dyslexia has been an advantage to you in your line of work?
Never
Do you use any specific learning methods / techniques / habits, personal to you that you have developed in respect to your dyslexia? (for reading, writing, learning new info, remembering, note taking)
Note taking, I tend to write nearly every word people say then at the end go back over just to be clear. And I tend to use a dictionary/thesaurus religiously.
Do you use any technology / devices that help you with reading, writing, note taking, organisation, which you feel aid your dyslexic needs? (ie. read aloud/ overlays/ipad/kindle)
I find using an ipad feels much easier but that's down to the design I suppose. Definitely using Apple software helps and dictaphones are a bit silly but useful.
Have you ever been commissioned to create design specifically to cater for the needs of people with dyslexia? (If so please describe)
No
How do you think your own experiences with dyslexia have influenced the way in which you approach your work day-to-day?
Just to avoid writing really and alot of copy and pasting. Apart from that it's not changed my methods alot
How do you think your own experiences with dyslexia have influenced your design style ?
I now try not to make my work words based
Can you suggest any work related resources that could be of use to dyslexic designers?
No
Can you suggest any new technologies & devices that could be of use to dyslexic designers?
There's a programme called read and write I think. There's a dislexia advisor called Ashley Pinn he would be able to tell you.
Are there any technologies that you would like to see developed to help dyslexic designers?
I don't think theres a lot you can do as to check everything you write would take a phenomenal amount of time.
Do you know of any other designers who have created work specifically for the dyslexic user?
I was at a D&AD sharpner last year and witnessed an Iphone app that a student had built to help dyslexia whist texting. I think (your have to check this) there's an that already exists.
Finally please could you name your top 3 designs that demonstrate good usability? (your own and/or other designers work)
Paul Rand, Saul Bass, Lester bielle. They all use shapes, this to me is very aesthetically pleasing, it's simple clean cut and have minimum text. (Images attached)

Al the best, Brinley