Academic Articles   Design and Printing

2017

"That's where dyslexia doesn't matter anymore when you're doing creative stuff": A case study on the experiences of learning with dyslexia on the Visual Merchandising and Display Degree Programme in DIT.

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"That's where dyslexia doesn't matter anymore when you're doing creative stuff": A case study on the experiences of learning with dyslexia on the BAVisual Merchandising and Display Programme in DIT.

A Case Study Exploration of dyslexic
students at an Irish Higher Education
Institution

A thesis submitted to Dublin Institute of Technology in part fulfilment of

the requirements for the award of Masters (M.A.) in Higher Education

by

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August 2017

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Declaration

I hereby certify that this thesis which I now submit for examination for the award of Master of Arts in Higher Education, is entirely my own work and has not been taken from the work of others, save and to the extent that such work has been cited and acknowledged within the text of my work.

This thesis has not been submitted for any academic assessment other than part fulfilment of the above named Award.

The work reported on this thesis conforms to the principles and requirements of the DIT's guidelines for ethics in research.

Word Count (excluding abstract, preliminary pages, references and appendices): **21757**

Signed………………………

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Abstract

This research focuses on how students with dyslexia experience and manage their situation on the BA Visual Merchandising and Display (VM&D) programme in the Dublin Institute of Technology (DIT). Dyslexia is an issue of growing importance for higher education with increasing numbers disclosing a specific learning difficulty. Under Irish law, Higher Education Institutes are legally responsible for providing an inclusive and accommodated environment for students learning with disabilities. One in every ten students in higher education is learning with dyslexia. Despite a lot of research on the effects of dyslexia, there is limited research on students' feelings and experiences in higher education learning and particularly in the art and design field. This research addresses the gap in the literature by putting forth views and perspectives of students with dyslexia on the VM&D programme.

This case study investigation is to discover effective strategies which will empower dyslexic students on the VM&D programme in their learning. It examines five dyslexic visual merchandising degree students' experiences in DIT by using semi-structured interviews. The dyslexic students interviewed all provided different accounts of their learning on the VM&D programme. I set out three questions in my research aims which underpinned my interview questions. These were:

- What are the academic impacts of dyslexia?

- What are the emotional impacts of dyslexia?

- What strategies can the students see as ways to help/improve their learning experience on the VM&D programme?

The findings that I present reveal how students experienced school and higher education. The emotional impact of dyslexia was prevalent throughout the interview. The experiences of supports throughout their learning journey in school and higher education factored heavily. Students' experiences of technology recommended through the literature differ slightly from what you would expect. Different perceptions of awareness from students and staff also emerged with strong data. Throughout the interview stage students offered different ways to help/improve the learning experience on the programme. What can these findings do to help us consider our practices and to enable students to meet their potential?

In the last 20 years it is accepted that language processing is the primary deficit of dyslexia. In western society education is ruled by literacy as a dominant discourse that defines academic ability. In turn, this is alienating our non-linear thinkers who are marginalised and labelled with a 'learning difficulty'. Students studying on creative cohorts, their written work did not reflect their creative and oral potential. This study then, provided a valuable opportunity to gain more understanding of dyslexia, to better understand the experiences of my students and to inform my teaching and assessment practices. This research also provides the opportunity for useful discussion about inclusive teaching practices on the VM&D programme, and that perhaps it can open up new conversations or at least raise questions about whether together we can promote/share best practice.

Acknowledgements

I would like to express the deepest appreciation to my extremely talented supervisor Dr. Ita Kennelly. For her excellent guidance, caring patience, and providing me with constant encouragement and constructive feedback. I am more grateful to her than she will ever know.

The warmest thanks to the staff at the Learning, Teaching and Technology Centre (LTTC), Dr. Jen Harvey, Dr. Claire McAvinia, Dr. Frances Boylan, Dr. Pauline Rooney Orla Hanratty and Lynda Boyd. A special thankyou to Dr. Roisin Donnelly for teaching me that anyone can write, her guidance and encouragement were inspirational. The warmest thankyou to Dr. Claire McDonnell, who had faith in me when I believed I could not succeed. I will never forget the compassion and exceptional guidance Dr. Claire Mc Donnell provided me with. I am sincerely honoured for the opportunity to work and study with such amazing tutors. A sincere thankyou to my class mates for all their support.

I would also like to thank my amazing family, my parents, two brothers, and sister. Special thankyou to my three sons, Oisín, Ewan and Elliot who kept me laughing when the going got tough, their support has been unconditional. I would like to thank three of my very best friends for their unconditional support and kindness, they have been a tremendous source of energy for me, without their help this research project would not have been possible.

Lastly, I wish to express a sincere thank you to the five amazing students who so graciously agreed to participate in this research. Without them, the completion of this study would not have been possible. I had invaluable assistance from the students who volunteered to share with me their learning experiences with dyslexia on the Visual Merchandising and Display programme. I believe that I am tremendously fortunate to have worked with five outstanding individuals, and am deeply appreciative to each of them for their important contributions.

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List of Abbreviations

AHEAD - Association for Higher Education Access & Disability

ATSO - Assistive Technology Support Officer

AT - Assistive Technologies

BDA - The British Dyslexic Association

CAD - Computer Aided Design

CAO - Central Applications Office

DAI - Dyslexia Association of Ireland

DARE - Disability Access Route to Education

DIT - Dublin Institute of Technology

DSS - Disability Support service

EDA - European Dyslexic Association

EHEA - European Higher Education Area

HEA - Higher Education Authority

HEI - Higher Education Intuitions

HETAC - Higher Education and Training Awards

IDA - International Dyslexic Association

IT - Information Technology

JISC - Joint Information Systems Committee

LINK - Learning Inclusively Network Know-how

LSO - Learning Support Officer

NFQ - National Framework of Qualification

NQAI - National Qualifications Authority of Ireland

PC - Personal Computer

UDL - Universal Design for Learning
VM&D - Visual Merchandising and Display

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CHAPTER ONE
Introduction

1.1 Context and rationale

There are a large number of dyslexic students in higher education, particularly in the Arts. In the academic year ending 2016, 45.5 % of the disability student's population had dyslexia (AHEAD, 2017). This study originated from an interest in a growing number of students learning with disabilities; 24.4% of students studying Humanities and the Arts have learning difficulties such as dyslexia. Initiatives in policy and practice, locally and internationally, have been instrumental in international collaborative initiatives (Reid, 2009). Educational authorities should also be open to new approaches. Dyslexia is a continuum disability where new perspectives and directives should be contemporaneous. 10% of students in higher education are learning with dyslexia (DAI, 2016b.). This project looks at the experience of students with dyslexia to better understand the DIT's mission statement that encourages "developing the potential of all learners and recognising the diverse student body" (DIT & HEA, 2014, p.11).

1.2 About dyslexia

Dyslexia is a specific learning difficulty which affects memory and processing speed, which can impact on literacy development such as reading, writing, and spelling (DAI, 2016b). There is no definite universal description for dyslexia; therefore, dyslexia can be difficult to define (Reid, 2009). Reid & Elbeheri (2009) also argue that it is important to acknowledge that people with dyslexia should not be considered a homogenous group, as not all dyslexics have the same profile. With that in mind, I have taken several different statement definitions from policies, dyslexia organisations internationally, nationally, and locally. I will discuss in detail a working definition of dyslexia later in this research. Dyslexic student's association with the fields of creativity are well documented (Reid, 2009). "The commercial world needs its creative thinkers, and we have the dyslexia millionaires to prove it. Similarly, universities need what dyslexic students can offer" (Brunswick, 2012, p.72). As a tutor, I have observed that students with dyslexia excel in the practical and creative modules on the VM&D programme. Their ability to think laterally, problem solve and think visually has enabled their success. Like Brunswick (2012) & Reid, (2009) I have seen the dyslexic student's alternative ability to see an object from every angle in their mind's eye, as a result they benefit working in a VM&D art environment.

1.3 Aims and objectives

This exploratory case study looks at real people in real situations in relevant areas of interest (Cohen, Manion & Morrison 2011). This qualitative study involved interviews with a purposeful sample of five students learning on the VM&D programme. Their contribution to this research illustrated how their perspectives created an opportunity to experience learning with dyslexia (Flick, 2014). This research study aims to use the voice of the dyslexic learner's experience and their insight into learning. I take the philosophy that the students' perspectives are valuable and have a significant contribution to make. What can we learn from the experiences of students learning with dyslexia, who make up 5.8 % (10,213) of the undergraduate population and 2.6% (1,031) of the postgraduate student population (AHEAD, 2017)? What can these findings do to help us consider our practices and to enable students to meet their potential?

1.4 Research questions

The purpose of this research is to understand the students' experiences and perspectives learning with dyslexia on the VM&D programme in the Dublin Institute of Technology. I set out three questions

• Firstly: What are the academic impacts of Dyslexia?

• Secondly: What are the emotional effects of Dyslexia?

• Thirdly: What strategies can the students see as ways to help improve their
learning experience on the programme?

This study was conducted using a case study approach which gave me the scope for in-depth exploration (O'Leary, 2010). Case study enables the delving into detail of a phenomenon (Cohen et, al. 2011). The in-depth review and analysis of data, were extracted using thematic analysis (Braun & Clarke, 2006). This study explored individual views of the participants', which independently offered different experiences both positive and negative.

1.5 My motivation

I work as an assistant lecturer on the Visual Merchandising and Display (VM&D) programme.

In my short time teaching (three years), I have encountered more than 12 students learning with dyslexia. Before my official involvement in this study, I had limited knowledge on general best practice for students learning with dyslexia. The concept of valuing the individual is rooted in my upbringing as a child of a deaf father. My ideas about different capabilities and abilities involve all students and respecting them as individuals despite their dyslexia or disability. I would love to research all disabilities, however because of the short time available for this research I concentrated on dyslexia. This study, provided a valuable opportunity to gain more understanding of dyslexia, to better understand the experiences of my students and to inform my teaching and assessment practices. As a tutor, my motivation is to navigate best practice for the student independently, and by listening to experiences of dyslexic students I can build on that knowledge to support the students' needs.

I would like to help create awareness of dyslexia. During my time interviewing the students I learned of their accomplishments and vicissitudes. Their issues varied in comparison to those identified in the literature. Reid (2009), emphasised how each dyslexic student profile is heterogeneous. I was compelled to learn how the participants coped and how they developed their learning. I learned from the participant's creative perception on learning strategies which needs highlighting. If statistics on dyslexia for 2019 become reality, nearly one in ten of the student population will be learning with dyslexia (AHEAD, 2015). There is an obligation to increase awareness and provide knowledge and resources to current and future programmes to ensure policy is put into practice.

CHAPTER TWO

Literature review

2.1 Introduction

As my title indicates this work is an exploratory case study which involves interviewing dyslexic students on the VM&D programme. Riddick (as cited by Reid & Elbeheri 2009, p.248) writing on the "implications of student's perspectives on dyslexia for school improvement", conclusively influenced my research questions. In this study, Riddick (2009) discusses the value of the student's opinion, "they can articulate what aspects of schooling enabled them to be successful and what aspects of education acted as barriers" (p. 249). Riddick highlights the need for change in teaching practice in both school and higher education supporting "a more dyslexia friendly environment" (p. 250). Riddick further argues that students should feel supported by a range of teachers. The dyslexia friendly approach emphasises the need for at least one teacher with specialist dyslexia training.

There is limited literature on post-graduate students with dyslexia, in particular, dyslexic students studying in art and design. 24.4% of students learning with particular learning difficulties choose to study in the Arts and Humanities (HEA, 2015). This literature review explores books, journals, electronic databases, research literature, policy documents and European Commission documents.

I am taking a funnelled approach exploring origins and definitions of dyslexia and from this exploration of literature. I hope to apply a working definition that best fits this research objective. This chapter focuses on four key areas which provide a framework for understanding the research question and findings in this thesis. The first area looks at different statement definitions on dyslexia, the second area looks at policy analysis and practice in Higher Education Ireland, the third area explores the Dublin Institute of Technology mission and policy on dyslexia and the fourth area of research looks at improving the dyslexic students learning experience,

- Statement Definitions and origins on dyslexia

- Policy analysis

- DIT mission and policy

- Improving the dyslexic students learning experience

2.2 Statement definitions and origins on dyslexia

Dyslexia in broad terms

Dyslexia is a matter of importance for higher education with increasing numbers disclosing this as a specific learning difficulty. There is no global definition of dyslexia; each dyslexic person has their unique characteristics. Dyslexia affects memory and processing speed, which can impact on literacy development such as reading, writing, and spelling. Dyslexia can be difficult to establish. It is a "hidden disability" as not all types of dyslexia have the same characteristics' (Rickinson, 2010, p.11; Reid, 2009). Dyslexia can also have an impact on phonological ability, mathematics, memory, organisation, verbal expression and sequencing skills that differ in each person. It has no relation to IQ, and the Dyslexia Association of Ireland states that dyslexia affects up to 10% of the Irish population (DAI, 2016b).

Analysis of dyslexia definitions

Working definitions across various research associations, Higher Education Institutions (HEIs) and government bodies differ. There are many ways the definitions are similar, but they all offer variations. Such a detailed discussion on dyslexia is beyond the scope of this investigation. Snowling's analysis of the possibility of a unitary definition being possible is outlined in "Is a unitary definition of dyslexia possible?" (Snowling, 2006 p.137). I will use a working definition for this research, which I have derived from a number of definitions. I have used various dyslexia organisations and policies internationally, nationally, and locally. This sets out the context for this study and has provided the foundation for my interpretation and analysis of data.

The International Dyslexic Association (IDA).

The IDA founded in 1920, is the oldest organisation devoted to the care and research of dyslexia. Its commitment is to provide dyslexic people with the full opportunity to gain complete information and services.

IDA definition: Dyslexia is a specific learning disability that is neurobiological in origin. It is characterised by difficulties with accurate and fluent word recognition decoding abilities and by poor spelling. In most cases, these difficulties are the result of challenges in the phonological ingredient of language. Other problems involve reading experiences, which can hinder the growth of vocabulary and knowledge (IDA, 2002)

The European Dyslexia Association (EDA)

The EDA is a European association of resources for national and regional people, children's parents, professionals and academic researchers with dyslexia.

The EDA definition: While research continues, most would agree that dyslexia is a developmental syndrome, has a neurological basis, has a high genetic contribution and responds to structured intervention. Dyslexia tends to be the term preferred by parents and individuals experiencing the condition. There are many reasons; they learn differently that traditional schooling is not accustomed. They do not accept the label disabled. (EDA, 2014).

The British Dyslexia Association (BDA)

The BDA, promote awareness and positive attitude towards dyslexia, the BDA represent the voice of dyslexic people, their objective for a dyslexia friendly society is inspiring.

The BDA definition: In 2007, the BDA Management Board approved the following definition: dyslexia is a specific learning difficulty, affects language related skills and the development of literacy. It is likely to be present at birth and to be life-long in its effects. Difficulties with the automatic development of competencies, memory, phonological action, rapid naming that often doesn't match other cognitive capacities. Technology and supportive counselling can aid and support teaching (BDA, 2016).

Dyslexia Association of Ireland (DAI).

The DAI provides information and appropriate support services for people with dyslexia. The DAI advocates creating awareness on dyslexia in education, employment and all strands of living (DAI, 2015).

The DAI definition: The DAI approved the following definition:

"Dyslexia can have varying degrees of some of the list here mentioned: mathematics, memory, organisation, verbal expression and sequencing skills. Dyslexia is characterised by cognitive difficulties and can have an impact on phonological ability. It has nothing to do with intelligence. Its basis is neurological, its effect differs from mild to severe. People with dyslexia may have various learning strengths" (DAI, 2016b & 2015).

The Dublin Institute of Technology (DIT)

The disability support service (DSS) use the definition given in "The Report of the Task Force on Dyslexia" which was set up in 2001 by the Minister for Education and Science in Ireland. Its aim to review and make recommendations on current, policy, education provisions, and support services for students with specific learning difficulties.

The DIT Definition:

"Dyslexia is manifested in a continuum of specific learning difficulties related to the acquisition of basic skills in reading, spelling and writing. Typically, characterised by inefficient information processing, including difficulties in phonological processing, working memory, rapid naming and automaticity of basic skills. Challenges in organisation, sequencing, and motor skills may also be present". (DIT, 2001, p31).

My working definition

All of the definitions have, useful characteristics that can be applied to this research, especially as the knock-on effect reading experience can have on cognition is significant (IDA, 2002). The BDA describe difficulties associated with dyslexia from phonological processing to the automatic development of skills, however these are not an accurate reflection of cognitive abilities. The DAI (2015) stress that dyslexia has no direct association with levels of IQ and can differ in each dyslexic person. Another influential factor underpinning this research is the BDA motivationally 'championing' the voice of the dyslexic people. Reid (2009), Riddick (2009), Brunswick (2012), the BDA and the DAI all promote removing potential barriers. They promote a dyslexia friendly association by supporting all dyslexic people to reach their full potential.

The EDA's working definition resonates strongly with my values. To begin with, their official definition defines some of the symptoms; however, they attribute the positive side of learning difficulties and value the dyslexic persons' potential. Secondly, I strongly agree with the EDA that dyslexic students should not be labelled as disabled and perhaps if we change some of our teaching methodologies we can enable all students to learn at a pace suitable to their needs. Finally, they stress their research is ongoing (EDA, 2014).

2.3 Policy analysis

The realities of the continuing rise in the number of students with disabilities in higher education (a 26% increase in the last two years) do not align with a similar increase in staffing levels across the sector (AHEAD, 2017). In 2015/2016, the number of students with a disability per staff member rose 21% year on year to an average of 122 up from 117 in 2014/15 (AHEAD, 2017).

Inclusive Education

Disability equality in Higher Education sanctions assistance for students learning with disabilities (Equal Status Act, 2000). In 2007, Ireland signed the United Nations Convention on the Rights of Persons with Disabilities. The convention was a milestone for those with disabilities and the wider society (Rickinson, April 2010).

National policy emphasises the importance of institutions embedding inclusive policies and practices (AHEAD, 2014). At European level, the Bologna Process emphasised: "strengthening the drive for social inclusion and ensuring that higher education is more representative of the whole of society" (EHEA, 2008, p.5). Students learning with disabilities under Irish law are legally entitled to an inclusive and accommodated environment (Justice 2015).

For this investigation, I will highlight the direct link between national policy and the promotion of inclusive practice for students with disabilities, in particular, dyslexic students in Ireland.

This section will research policy at the national level then move into local level at DIT.

National Access Plan for Equality of Access to Higher Education (HEA, 2015)

The Department of Education and Skills and the HEA developed the new Access plan (HEA, 2015). For almost two decades the National Access Plan for the Equity of Access to Higher Education in Ireland has promoted equality of educational opportunity for students with disabilities. The plan, encouragingly, advocates institutions to implement best practice to enable a student with a disability to participate in education inclusively. The HEA regularly review each HEI on their performance on agreed targets. Each HEI must be able to show progression and how they propose to advance the national priority for equity of access. The National Access plans policy is to ensure students from target groups and communities are "equitably represented across different disciplines and professions" (HEA, 2015 p.42). "As a country, we have everything to gain and nothing to lose by increasing levels of participation among all Irish citizens" (HEA, 2015 p.1).

The Charter for Inclusive Teaching and Learning

The National Access Plan for Equality of Access to Higher Education influenced AHEAD to develop the charter for inclusive teaching and learning. The Charter worked together with AHEAD, Irish Higher Education Institutions and European Higher Education institutions. Also, students with disabilities, the Disability Advisors Working Network, Access Officers and the LINK network were consulted. Also consulted were the Irish Universities Association, the Higher Education Authority, the Department of Education and Science, the National Learning Network, HETAC, the Irish Universities Quality Board and the NQAI. The consultation process included: higher education lecturers, interested bodies from Ireland and Europe, students with disabilities and access officers (HEA, 2015).

The charter's aim is to modernise Higher Education in accordance with the Bologna process, to enhance the quality of the teaching and learning experience for students with disabilities (EHEA, 2008; HEA, 2015). The aims of the charter also recommend, at a minimum, the use of the students' voice to build engagement and consequently to remove barriers so students can engage in classroom activity equally. These are simple strategies that should be implemented.

The Disabilities Access Route to Education (DARE)

Initiatives from the National Access plan included a fund for students with disabilities initiative (HEA, 2014a). A core development in national policy was The Disabilities Access Route to Education (DARE). The DIT is one of the eighteen colleges nationwide to participate in the DARE scheme, DIT and DARE collaboratively work towards an inclusive access entry route

reducing pressure on students with disabilities by lowering the entry points needed (DARE, 2016). In the National Framework of Qualifications (NFQ) from the period of 2014 to 2016, a critical national objective was for the promotion of access for disadvantaged groups from second-level education into higher education (HEA, 2015).

2.4 DIT mission and policy

The compact statement between The Higher Education Authority (HEA) and the DIT, describes how it can best serve the interests of the students, the staff and key stakeholders. DIT and the HEA recognise that DIT is an autonomous institution that is accountable for controlling its mission. The HEA must ensure a consistent higher education system, ensuring that national needs are met. The HEA encourage the different institutions under the DIT umbrella to adopt a united mission (HEA 2014b).

The DIT mission promotes inclusivity "Striving to create a friendly, collaborative and trusting community, where diversity is valued, individuals treated with respect, encouraged to develop their potential and make their contribution, and pride shared in our collective identity" (DIT, 2014a, p. 4). The DIT mission is indeed a positive expression of DIT's aims and values. Collaboratively, all stakeholders are influenced as a community to appreciate and respect the multiplicity in our colleges. From a tutor's perspective with regard to DIT's mission statement, I have experienced an environment where diversity is valued and a united parallelism is welcome. Part of the DIT's mission will be the single campus that will house the 30 separate DIT sites onto the new campus at Grangegorman. DIT's mission encourages Grangegorman to facilitate a "creative learning environment and a high-quality student experience", (DIT& HEA, 2014, p.11).

Equal Access DIT

Almost half of third level students with disabilities are affected by dyslexia (AHEAD, 2017). Research shows that students clustered in certain faculties, for example, art and design are among these courses (AHEAD, 2017). Since 1995, Equal Access DIT has promoted equal access targets, providing a committed access support strategy. DIT's current plan for increasing participation has seven key intentions; the first two target students learning with disabilities see (Appendix 10) for targets (HEA, 2014a).

DIT Code of practice for students

The Dublin Institute of Technology pledges a policy of equal possibility in education that students with a disability have as equitable access to all aspects of college within reasonable accommodations. The Equal Status Act 2000-2004 presents opportunities for institutions such as DIT to conduct a code of practice and implement strategies and services to facilitate students with disabilities. Its aims ensure that it does not place a student with a disability at a substantial disadvantage compared to a nondisabled student (DIT, 2017a). DIT has a support structure in place called DIT Widening Participation where "DIT defines participation of DIT in the social, cultural, economic and educational lives of members of Widening Participation groups, and their involvement in the enrichment of DIT as students, staff, collaborators and graduates" (DIT, 2015, p.1).

DIT encourages a 120-year tradition of providing educational opportunities for all students. DIT seeks to assist all social groups to overcome barriers that might prevent them from participating in higher education. In 2014 one out of five students applied for higher education through DARE, this number is continuing to grow (DARE, 2015). Support strategies for students learning with disabilities outlined in Widening Participations at DIT include, the Disability Support Service (DSS), Learning Support Officer (LSO), Assistive Technology Support Officer (ATSO) and how to apply for the DARE scheme. The intention of these support networks is, to assist all social groups in overcoming any obstacles that might prevent them from participating in college life (DIT, 2015).

2.5 Improving the dyslexic students learning experience

My career spans over twenty years in the VM&D industry, in which I now teach. Institutions are slow to innovate and spend valuable time researching and drafting policy which can be outdated before it is implemented due to the rapid changes in the field of disability policies. Universities and colleges could learn a lot from the fast-paced problem-solving VM&D world where dyslexic people thrive.

Reid & Elbeheri (2009) highlight that there is still no "clear explanation that's universally accepted of what constitutes dyslexia" (p. 3). Over a hundred years ago the first descriptions for dyslexia used the term 'word blindness' associating problems with visual interpretation. In the last 20 years, it is accepted that language processing is the primary deficit of dyslexia (Reid.

2009). In western society educational spheres, literacy is the dominant discourse that defines academic ability (Hickman & Brens, 2014). In turn, this is alienating nonlinear thinkers who are marginalised and labelled with a 'learning difficulty'. It is every institution's responsibility to embed best inclusive teaching practice for all students.

Snowling (2006), Reid (2009), and Riddick (2009), all encourage influencing student's educational experiences and tapping into the different individual needs of the dyslexic learner. Snowling (2006) states, "Dyslexic students need much more than the usual diet of classroom support" (p.216). The dyslexic thinker thinks in a way that can benefit all learners; perhaps we need to look at our strategies and teaching to make education more inclusive for all. Reid (2009) has influenced some of my research. He encourages using perspectives from international experts engaged in literacy, learning and inclusion alongside dyslexia students.

Reid values the student's point of view alongside the experts to give a three-dimensional perspective. Brunswick (2012) states that a lot of students with dyslexia's knowledge is gained through experience and a multi-sensory approach, which enables them to approach problems from different aspects and make unique creative connections. An example which illustrates this ability was when one of the interviewees, Tia, made a suggestion: *I think if there are more people with dyslexia the briefs should be more visual, even have the same brief same concept with pictures, maybe a little footnote with a visual.* Like Tia, Brunswick (2012), Reid (2009), JISC (2015), Adams & Browne (2006), Riddick (2009), Hargreaves & Crabb (2016) and Rose & Meyer (2006) all suggest providing information in multimedia/ multi-sensory format. This gives all students the opportunity to learn. From a tutor's perspective, I have seen the problem-solving connections that dyslexic students make effortlessly.

Elliot & Grigorenka (2014) question the expression 'dyslexia' and debate its effectiveness as identification. Elliot & Grigorenka (2014) argue that parents of children might be misguided into thinking that a diagnosis will point to effectual forms of remedy. Any debate on dyslexia is welcome as it creates awareness. Elliot & Grigorenka (2014) argue that dyslexia does not constitute a natural category, regarding cognitive profile, genetics or neurobiology and is too broad for a diagnosis. Elliot questions the 'dyslexic label' and recommends a blanket use of 'reading disorder'. However, the term dyslexia provide people with a positive view of the important system of supports and varied teaching strategies dyslexia may need. There may be arguments against the term 'dyslexia', but the reality when accurately applied is that it can

change a person's life. Dyslexia, as a name, emerged out of decades of research and innovative approaches (DAI, 2016b, IDA, 2002).

In the art and design field there is a gap in the literature describing how teachers gain knowledge and implement accessible practices for students with disabilities, in particular, students learning with dyslexia. 24.4% of students studying Humanities and the Arts have learning difficulties such as dyslexia and these findings are reflected on the VM&D programme. In three years, I have encountered over twelve students learning with dyslexia. Griffin & Shelvin (2008) state that, awareness and training with staff /college can help understand limitations and barriers. Griffin & Shelvin (2008) also highlight positive staff/collage awareness ensures access and equitable treatment.

JISC (2014b), formally known as The Joint Information Systems Committee, recommends that policies are embedded into the teachers' training and updated regularly. Before a student enrols, AHEAD (2016a) believes that all staff should be equipped to deal with any situation; they should have the knowledge and resources to cope with all students' needs in advance. In Higher Education Institutes, the model of inclusivity, coupled with a lack of widespread expertise and limited resources can limit the use of additional practices for all students and can lead to a preference for the use of adapted routine practices. Rickinson (2010) & Reid & Elbeheri (2009) cite that dealing with dyslexia can, in fact, be a creative experience for both students and lecturers, which can enhance problem-solving skills and inspire innovation. Snowling (2006) & Reid (2009), encourage influencing student's educational experiences and tapping into the individual needs of the dyslexic learner.

Inclusive practice

Reid (2009) proclaims dyslexic students are more often visual/spatial thinkers and that they see an object or a situation in their mind's eye where they creatively problem solve and discover solutions in an insightful capacity. In my experience of the dyslexic students, I agree with Reid & Elbeheris' (2009) notions with respect to their ingenious resourcefulness. They credit dyslexic students as having "dyslexia creative powers". "The link between dyslexia and creativity and why supporting dyslexia people is not only socially responsible, but also richly rewarding and a worthwhile investment for the future" (Brunswick, 2012, p.198).

From my experience of both teaching dyslexic students and dyslexic staff I have hired, all have displayed determination, creative problem-solving skills, drive and instinctive critical thinking skills. Their ability to see a mental image of something and their attention to detail certainly makes them assets to any establishment. The dyslexic students' experience in education will influence how well they progress and achieve in society (Brunswick, 2012).

Inclusive practice is equitable practice – it reduces barriers for dyslexic learners but also provides positive benefits for all other learners. Inclusive practice gives us the opportunity to learn from our experiences and collaborate to inform best practice. Nind et al (2004) and Sheehy et al (2009), highlight that lecturers need to take advantage of sharing knowledge, and that staff should also use the experiences of students to create and use material. Nind & Sheehey, et al., argue lecturers need to be prepared to identify strategies which are favourable and able to share this knowledge as a community.

The Universal Design for Learning (UDL) framework is based on a model of learning variability rather than highlighting disability and is strongly encouraged by AHEAD (2015). The UDL strategy encourages higher education to implement and leverage the flexibility of digital technology to design learning environments from the outset and offer options for the diverse learner need (Meyer, Rose & Gordon, 2014). Meyers (2014), argues that the UDL policy gives all students, teachers and staff equal opportunities to learn while also giving educators new ways to teach. 'The Charter for Inclusive Teaching and Learning', also recommends the seven principles of UDL which I believe are simple techniques that should be standard across all education, see Appendix 1 for the seven principles of UDL. If DIT were to adopt the UDL model, they would be closer to an inclusive learning environment.

Active learning

Nind et al., (2009) discusses the reality of institutions teaching theory-based subjects and conclude that they should consider including practical work to involve all learners. Active learning is where students, under the guidance of the lecturer, work together to identify learning strategies and learning outcomes (Reid & Elbeheri, 2009). This is more representative of industry practice, and active learning should be encouraged to support the learning and development of all students. Reid & Elbeheri encouragingly state, "success can usually be acquired if the learner achieves so it is important to ensure that the task is achievable" (2009, p.193). Vygotsky's Zone of Proximal Development enables students through encouragement, practice, guidance from the educator and trial and error to learn how to learn (see Figure 1)

(Jordon et al., 2008; Vygotsky, 1978). Reid (2009), also argues that universities need to encourage awareness and best practice when dealing with dyslexia, he states that in some cases new teachers had "less knowledge than some of their students on the subject" (p.11).
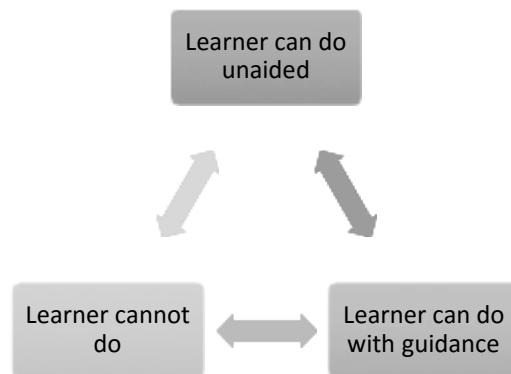
Figure 1: Vygotsky Zone of proximal development (Vygotsky, 1978)

Adams & Brown (2006) contend that diversity should be promoted socially and in higher education. The notion of partnership with students and tutors for "the greater good of Higher Education" resonates with my research objective (Adams & Brown, 2006 p. 29). Symonds, as cited by Hargreaves & Crabbs (2016), suggested students studying on creative courses produced written work that did not reflect their creative and oral potential. Hargreaves & Crabbs (2016) also highlight that students with dyslexia have strengths in problem-solving and lateral thinking, a critical skill in the creative art and design world. Symonds inspiringly supported students using an oral assessment for their dissertation which included a research presentation and critical analysis. I would support the use of alternative methods of assessment, as Symonds suggested as this is more representative of industry practice.

Strategies to support all students learning

JISC's (2015) view is one of championing technology and taking the positive aspects and applying them in day-to-day practice in Higher Education. Teachers need to make use of the exciting new technologies for learning to support dyslexia (Johnson, 2015). Hargreaves & Crabbs (2016) argue that by adapting teaching methods to include the use of accessible documents and presentations that this will serve to benefit all learners, including those with dyslexia. Explicit instruction, limited text and mind maps are all uncomplicated adaptations to a programme, while meeting the needs of all students.

Dyslexic learners can benefit from tutors using technologies such as multimedia: using simple summary in video and audio format to deliver content. Graphics, photos, diagrams and mind-mapping tools can assist organising and sequencing information. Also, the use of interactive whiteboards, voice recognition tools, auto correct and auto text needs promoting for use across all educational levels (JISC, 2014a, 2014b, 2015). Tutors can assist by using readily available technology such as the inbuilt heading styles (accessible Word documents). Tutors need to be aware and promote the best practice utilising accessible technology. The use of the inbuilt accessibility checker informs tutors about Microsoft Office features which can be used to make course content more available; this needs embedding into the course structure. Lecture notes beforehand and recordings afterwards benefit dyslexic students (JISC, 2015). Adopting an inclusive policy, accessibility practices and the UDL strategy can only benefit the needs and interests of all users. Creating accessible resources benefits all learners, including students, teachers, and members of the wider educational system (JISC, 2015; Meyers et al., 2014 and Nind et al., 2004, 2014, 2009).

2.6 Conclusion to chapter

The encouragement of non-traditional students is central to the production of an educated and prosperous society (Rickinson, 2010). Mirrored with our UK neighbours, of the general population 10% are thought to be dyslexic. Nind (2014) argues that institutions should have strategies in place before any student with a disability enrols and should follow best practice, they set an example for the whole organisation and how policies impact on students with disabilities.

Griffin & Shelvin, (2008), have argued that a constructive and knowledgeable staff/college will lead to positive awareness of dyslexia. Rose & Meyer (2005) declare that tutors can make a difference by doing the basics better, extending their stock of resources thus making the learning experience more satisfactory. They also stress the need to continually identify new kinds of learning and new ways of teaching. Many believe that the needs of dyslexic learners can be met by using technology enhanced learning (JISC, 2015). Training for all staff should include more than just disability/dyslexia awareness. There are free open source versions of support tools or commercial versions available. The Dyslexia Association of Ireland (DAI) runs interactive technology workshops informing participants of how technology and various apps can benefit people with dyslexia (DAI, 2016). "One urgent reason for change derives from the rapidly increasing diversity of learners in our classrooms and the limited capacity of printed media to respond to that diversity." (Rose & Meyer 2005, p.3).

Communication within a college needs to include all staff and colleges are obliged to ensure no one is at a disadvantage because of a disability (Department of Justice, 2015). Institutes have the power to ensure as many people as possible can access their services. The responsibility lies with the faculty, management, and stakeholders to embed organisational systems which can support accessibility and inclusion. Sharing good practice and policy need to be standard, and Jorgensen, Schuh, & Nisbet, (2005) advocate inclusive practice is good practice, along with disability awareness; it can directly affect the experience of students with specific learning disability.

AHEAD, (2014) & JISC, (2015 & 2014b) urge that strategies and policies surrounding a commitment to accessibility can ensure colleges are inclusive and can benefit all of its learners and staff. Inclusive practice is best practice – it reduces barriers for all, but also provides positive benefits for all students and staff. The question we need to ask is: How can we bridge the gap between policy and practice for our dyslexic students?

CHAPTER THREE

Methods and Methodology

3.1 Introduction

This study aims to look at the experiences of dyslexic students learning on the VM&D degree programme. The project seeks to listen to students speak about their experiences and various strategies. Despite a lot of research on the effects of dyslexia, there is limited research on students' feelings and experiences in higher education learning with dyslexia in the art and design field. There is a gap in the literature with regard to knowledge on feelings and experiences from an art student's perspective. I am interested in exploring how the dyslexic students' experience and feel about the "usual diet of classroom support" (Snowling, 2006, p.216).

3.2 Research question

This is a case study on the experiences of learning with dyslexia on the visual merchandising and display programme, from the voice of the dyslexic student. The purpose of this research is to understand the student's experiences of learning with dyslexia on the Visual Merchandising & Display programme in DIT. I have set out three questions which will explore,

- What are the academic impacts of dyslexia?

- What are the emotional effects of dyslexia?

- What strategies can the students use to help/ improve their learning experience on the programme?

3.3 My research objectives and approach

"The function of the investigation is not necessary to map and conquer the world but to sophisticate the beholding of it" (Stake, 1995a, p.43). I have chosen this quote from Stake, because it underpins my motivation and interest from the dyslexic students' perspectives. I do not claim to have an absolute knowledge of dyslexia; the aim of this study is to research and learn as much as possible about the learning environment for all students, in particular students with dyslexia on the VM&D degree programme. A natural fit emerges in this case study, exploring the lived experiences of the dyslexic students. The dyslexic students' own knowledge

on dyslexia, how they feel and experience dyslexia on the VM&D programme can provide a new directive and richness of information.

One key aim of this research project is to establish if interviewing the Visual Merchandising & Display students who have dyslexia can influence best practice and learning strategies useful to all. I hope to improve my professional knowledge as well as developing new ways of enabling learning for all students and students with dyslexia. I hope to do action research in the future as a continuum from what I learn from this research study. I hope I can trial a module using recommendations from the participants which hopefully will provide a positive inclusive learning experience for all students.

3.2.1 My Research Position

Before my official involvement in this investigation, I had limited knowledge on general best practice for students learning with dyslexia. The concept of valuing the individual is rooted in my upbringing as a child of a deaf father. My ideas about different capabilities and abilities involve all students and respecting them as individuals despite their dyslexia or disability. I would love to research all disabilities however the short period of time allotted to this research meant I had to concentrate on dyslexia. As outlined in the literature, there are rapidly growing numbers of dyslexic students in higher education, particularly in the arts which this makes this work valuable.

I am an assistant lecturer; I teach the practical subjects in the first, second and third year on the visual merchandising and display degree programme in the DIT. In year one I teach strategies in VM&D and the practical application of the fundamentals in VM&D (see Appendix 4 module descriptors year one). In year two I teach the practical implementation of VM strategies focussing on fashion, accessories and fashion styling (See Appendix 5 for year two module descriptors). In year 3 I support students on work placement (see Appendix 6 for year three module descriptors). Other subjects covered on the programme include the theory of visual merchandising and display, business, communications, Auto-CAD, art history and critical theory (see Appendix 4, 5, 6 for year one, two, and three module descriptors). In my three years of teaching, I have taught more than twelve students with dyslexia and I had to research various supports as the need arose. Working with the dyslexic students on the VM&D programme, I am encouraged to see how we could potentially develop new teaching methodologies to enhance the learning experience of the dyslexic students in the DIT. This study provides unique

insights into learning on the VM&D. In my opinion it makes us stop, think and listen to the dyslexic students who might otherwise be overlooked.

My Ontology and Epistemology

The epistemology I intend to deploy is an interpretive paradigm, employing qualitative techniques involving semi-structured interviews with a sample of dyslexic students from the VM&D programme (Creswell, 2007; Stake, 1995a; Yin, 2012). Interpretive ontology like constructivism is concerned with meaning and social construction of reality, also applying prior knowledge with new findings to gain a more in-depth understanding of a subject at that moment in time (Jordan, Carlisle & Stack, 2008; Yin, 2013; Flick, 2014).

The constructivist perspective alters not only our understanding of individual differences but also its potential for changing teaching practices (Biggs & Tang 2007; Jordan, Carlisle & Stack, 2008). If I want to be the best at teaching, I need to have the ability to understand different teaching strategies for all students. I value the students' opinions, different views of the world and different ways of gathering knowledge (Daniels, 2001). The advantage of working with the dyslexic students enables them to construct their knowledge and offer their interpretation and how they experience learning on the VM&D programme (Gallaher, 2005). Empowering the dyslexic students to influence the production of new knowledge in the VM&D classroom underpins my epistemological position.

3.4 Selecting a Research Methodology

Creswell (1994) and Yin (2010) state that qualitative researchers are interested in meaning. This research study was to understand the dyslexic students' perspective on how their meaning and experiences can influence teaching and learning for the good of all. People find meaning by building on previous knowledge and that each person's interpretation is unique to their experiences (Jordan, Carlisle & Stack, 2008). Because my research question is primarily concerned with seeking to understand the participants' unique experiences, I choose qualitative methods. Qualitative research is most relevant to explain serial links in real world situations often too complicated for experimental methods and surveys (Grix, 2002; Yin, 2013). The aim of the qualitative methodology is to pursue "an interest in understanding the lived experience of other people and the sense they make of that experience" (Yin, 2010,p.9). The dyslexic participants were asked to participate and share their experience on the VM&D programme.

Creswell (2007, p.93) states that in a case of study "a particular instance is examined, often with the intent of studying an issue with the case illuminating the complexity of the issue". This research study set about exploring the dyslexic students' educational and social experiences, how dyslexia can impact their learning on the VM&D programme. A case study was the most appropriate methodology to "maximize both relevance and practicality", and to inductively explore new teaching and learning strategies from the perspectives of the dyslexic students on the VM&D programme (O'Leary, 2010, p.174).

Case study research

In this case, the dyslexic students on the VM&D had the opportunity for their students' voice to be heard (Brown & Adams 2006). The case study research methodology develops with the discovery of situational perspectives embedded in the phenomenon (Cousins, 2005, 2009). This case study research, studies five dyslexic visual merchandising degree students in DIT. Cousins states that case study "aims to explore and depict a setting or intending to advancing an understanding of it" (2005, p.422). Simply this investigation is to discover effective strategies which will empower dyslexic students on the VM&D programme in their learning. By using case study methodology, the study of dyslexia from the dyslexic participants on the VM&D programme gave a more in-depth perspective of their learning experiences (Mills, 2010; Yin, 2010; Yin, 2011). Case study gives the opportunity to gain direct insight to help you go further to best understand a phenomenon (Yin, 2010, 2011, 2013). The dyslexic students interviewed all provided different propositions of their learning on the VM&D programme. "Your case is not a sample; it is an opportunity to shed empirical light about some theoretical concepts or principles" (Yin, 2013 p.45). I agree wholeheartedly with Yin's statement. Yin encourages valuing your case. It merits the participant's vital significance to the research.

3.5 My Procedures

Data Gathering

The most used technique for systematic social inquiry is interviewing (Stake, 1995a; Yin 2013). The methodology involved semi-structured interviews with a purposeful sample of current dyslexia students from the VM&D programme. The sensitive nature of dyslexia was the main reason for using interviews. It is not appropriate to put

participants with dyslexia under pressure to read, write or spell, as usually dyslexic students have difficulty with some of the above depending on the severity of their dyslexia.

Valuing students as stakeholders

Mc Loughlin & Leather (2012) believe that those working with adults need to make efficient use of individual strengths and previous experience. Often overlooked as a resource in education are the students! By interviewing dyslexic students, it provided a useful opportunity to gain new valuable knowledge into learning on the VM&D programme with dyslexia. It certainly provided me with insight into how each dyslexic student experiences learning and how their world should be and how it was shaped by past experiences (Yin, 2013). The purpose of this study, therefore was to gain a valuable perspective on the education of the dyslexic students and to view what impact dyslexia has on teaching. Also what strategies they use in order to learn effectively.

The case considered a purposeful sample involved a total of five students who were in first year and third year currently studying on VM & D programme. Yin, (2010) & Stake (1995) suggests a sample size of three to six participants is sufficient for case study research. Creswell writes qualitative research is prototypical "to explore a few individuals or a few cases" (2014, p. 209). The participants are all female as the VM&D programme tends to attract more female than male (one in thirty are male). All those involved with dyslexia have provided evidence of disability/supporting documentation from an acceptable professional source to the disability support office.

Audio recording data

All semi-structured interviews were recorded using an audio recording device on iPhone which was compatible with transcribing software. I kept notes and a journal throughout the preparation and discussion stages. This is an integral part of the qualitative study. I sought permission from all participants to record them using an audio recording device. All audio equipment was tried and tested beforehand. Information was stored securely on my own secure laptop, therefore protecting all participants. I transcribed all interviews from the audio recordings using the *wreally* software. All transcripts were also checked manually then rechecked against written

notes compiled during the meetings. All feelings and useful reactions noted during interviews were transcribed immediately after, so information was fresh (Grbich, 2007). Data analysis emerged with the transcribing process. I became very familiar with the content, and the emergence of themes was evident gradually.

Interview Questions

I used the information and guidelines for lecturers and staff from the DIT website, in particular, the section on dyslexia to guide my interview questions (see Appendix 9). Literature from Brunswick (2012), Reid & Elbeheri (2009), Riddick, (2009) and Snowling (2006) all informed my questions. I conducted a pilot which was carried out a couple of weeks before the interviews. I was also aware that my potential sample size was already small, and I did not want to use potential participants. The objective of piloting the questions was to analyse the relevant topics I needed to cover ahead of the interview stage.

Piloting proved to be an invaluable exercise. It meant that I had a better understanding of how dyslexic students comprehend the questions and I was able to adjust them. The main aim was to phrase questions carefully to avoid confusion. I edited the questions, focused more on dyslexia rather than broad questions. I framed my research questions on topics which reflected in the literature, such as accessing college, transition into college, the disability support services (DSS) and the teaching and learning environment (see Appendix 7 interview questions).

Interview Structure

Participants were made aware of the aim of the research before the interview. I was conscious of the need to respect the participants and use an open mind. Yin (2010) also states the researcher should certainly know about their topic of study. Through themes identified in the literature review, I tried to arm myself with relevant knowledge about students learning with dyslexia in Higher Education. Participants were given the opportunity to ask questions, it also gave the opportunity to clarify ambiguity (Yin, 2010, 2013). An interview protocol served me as a "a mental framework" guide using a small subset of topics relevant to the interview (Yin, 2011 p.139).

Data was collected through face to face semi-structured interviews, using open-ended questions to let the participants speak freely (Flick, 2014). The qualitative interview is a two-person conversation initiated by the interviewer for the particular purpose of obtaining research relevant information. The meetings focused on content specified by research objectives of description, prediction, or explanation (Cohen & Manion, 1994; Cohen, Manion & Morrison, 2011).

"When working with participants your ability to generate rich data will depend on building high levels of trust and rapport" (O' Leary, 2011, p. 177). The one to one interviews indeed enabled me to build a rapport, and knowing the participants led to the discovery of more in-depth findings. Conversation flowed and the participants opened up and shared their experiences. The duration of each interview was between 40 to 60 minutes. Discussions took place on campus in a bright informal private meeting room. Establishing a rapport is paramount, "the art of asking or the art of listening?" (O' Leary, 2011, p.194). O' Leary encouraged the interviewer to listen to hear the meaning of what is said, talk only enough for the participant's voice to be drawn out. I was conscious of leading and conversing without dominating; I welcomed an opportunity for the participants to express their perceptive views (Cousins, 2005). When the interviews were over the participants were given details should they need to ask further questions or withdraw.

3.6 Participants

All students gave their consent to help me with my research *for the good of the cause*. The mix of first year and third year students provided a combination of topics from transition to experiences throughout the VM programme. Interviewing year three students at the end of their college career was an invaluable source of information, they reflected on what worked and provided future recommendations. For confidentiality, I have used different names to identify the participants.

Ethics

Ethical considerations are an important part of the research, respecting the participant's valuable contributions and their time. The utmost respect and care are essential when investigating students with dyslexia. Protecting the participants from any harm or

upset is essential. My Ethics procedures involved ensuring the participants' privacy and integrity and 'moral obligations' (O' Leary, 2011). During this research, all participants were assured confidentiality (Cohen & Manion, 1994; Cohen et al., 2011). I had informed students from year three and year one of my research proposals, and all willingly agreed to participate at very early stages of the research. Reassurance was provided that any data received was made anonymous and stored securely.

All participants were made to feel comfortable and at ease by giving an overview beforehand in an 'information sheet' (see Appendix 2). The information sheet stated the aim of the project, and reassuring the participants of their right and any risks associated with participation (Ethics DIT, 2016). All participants were advised of recording in advance of the interview. All students were over 18 and only information that participants consented to was used (see Appendix 3 consent form). Best practice is to have two signed copies of the information and consent form: I kept one, and the participants retained the other (Ethics DIT, 2016).

3.7 Data analysis

Appreciating different creative perspectives can lead onto new "forms of understanding education", (Cohen et al., 2011, p. 290). I chose thematic analysis as it offers an inductive form of analysis (Gibbs, 2013). Braun & Clarke (2006) argue, if done correctly thematic analysis is a sound form of analysis for qualitative research. Braun & Clarke provide a table using six phases of thematic analysis from familiarising yourself with your data to producing the report (2006, p.35) (see Appendix 8). Braun & Clarke state "A theme captures something important about the data about the research question and represents some level of patterned response or meaning within the data set" (2006, p. 10). The thematic analysis is a useful approach as the theme is determined at the discretion of the researcher (Gibbs, 2013). For this research, I followed Braun& Clarkes six phases of thematic analysis as outlined below.

1. **Familiarising oneself with your data:** This was the most important part of the analysis for me, I read and re-read the transcripts several times, I wrote themes and feelings in the margin.

2. **Generating primary codes:** I identified emerging units of meaning by reiterating reading of data, this was an important aspect in developing initial

codes, I was getting a feel for the data and themes were starting to unfold. I coded emerging themes with colour post-its which enabled me to identify the themes at a glance. I conducted a word search to familiarise myself with the data. The word search was a useful tool to get a feel for emerging themes.

3. **Searching for themes:** I categorised themes descriptively as they emerged, the qualitative data coded into several key themes and sub-themes. Initially, I grouped the interview questions with the answers given by each student together, but later abandoned this method and let the data emerge. Each interview question received a different interpretation which led on into different themes and sub-themes naturally.

4. **Reviewing themes:** The analysis was carried out by regularly returning to the data back and forth to investigate further the developing themes. I re-listened to interviews several times to make sure nothing was missed, I found re-listening to the interviews important to reiterate the student's interpretations.

5. **Defining and naming themes:** I categorised different smaller units into the overarching themes and grouped themes together to form stronger themes. As a result, it focused themes more and made writing up of the report more manageable.

6. **Producing the report**.

This framework worked well with my project because it provided guidance and a rigorous practical approach to data analysis.

3.8 Themes

Firstly, I read the scripts then a word search was used to identify recurring themes and to familiarise myself with the data. Feelings and words that had meaning were marked in the margin of the document; pages were numbered after several readings of the data. Then an iterative process was used where the primary themes and findings were unravelled and double checked using a paper based technique. Influenced by the students' recommendations, the use of post-its and colour coding was used to organise the first themes. Here is a flavour of words that emerged: *anxiety, spelling, CAD, help, and art*, I have moved these into particular themes such as emotional impact, academic

impact, and awareness, all will be discussed in more detail in chapter four; discussion and findings.

Thematic analysis allows for the analysis of the data set to find "repeated patterns of meaning" which led into sub-themes within the topics (Braun & Clarke, 2006). The interviews were listened to several times and cross checked with the verbatim over ten times to ensure no crucial information was missed. A recommendation from the dyslexic students interviewed and Braun & Clarke was the use of mind maps, this helped conceptualise the themes. Data was systematically and rigorously rechecked (Yin, 2010, 2013).

My Reflective Journal

The use of a reflective journal led to changes throughout the research from the evolving research question. Meetings with my supervisor focused me back to my research question and examined how and why? The reflective process also made me question how being flexible will also allow for the research to develop.

My reflections

I documented my practices as a researcher and reflected critically on those processes and practices. The interest in dyslexia led me to concentrate this study solely on the experiences and perspectives of the dyslexic students and fostering equality and respect by using their voice. I came to the conclusion that there is no right way of knowing and we should always question and develop our understandings.

CHAPTER FOUR

Data Analysis Discussion and Findings

4.1 Introduction

This chapter will review the data collected as part of this exploratory case study. I will describe the analysis of the data and the meanings and experiences from the perspectives of the students. The in-depth review and analysis of data were extracted using thematic analysis (Gibbs, 2013). Qualitative data coded into several key themes and sub-themes (Braun & Clarke, 2006). After the introduction, this chapter is divided into six thematic areas,

1. **Learning experiences in school**

2. **Academic impact of dyslexia**

3. **Technology**

4. **Support**

5. **Awareness**

6. **Emotional impact**

This study explored the individual views of five dyslexic students on the VM&D programme which independently offered different experiences both positive and negative. I aligned the participants' responses under each key theme with relevant sub-themes. Quotes were used from the participants' interviews to exemplify some of the themes and show the dyslexic students' attributional explanations. The emergence of academic themes, and the impact dyslexia had on the dyslexic students was apparent from the first stage analysis of the transcriptions. They included both positive and negative experiences. All names were changed to protect participant confidentiality. I had considered providing a pen picture of the students ages and year of study. However, I felt there was a risk of compromising their anonymity.

 Whilst many of the themes overlapped, all of the themes displayed emotional impact. One such theme being the participant's learning and social experiences in school carried into their college career. It is significant to note that during the first stage of analysis, all the dyslexic students knew that their strengths were in the creative,

practical, art side of education. The EDA (2014a) highlights that dyslexic people have many talents; among these are lateral thinking, architecture and creative arts. The students' consistent ability to articulate their own perceived experiences enabled an insightful representation of learning with dyslexia on the VM&D programme. The dyslexic students all developed teaching and learning strategies that facilitated their learning. The interview questions covered a range of topics relevant to the research questions. Words that emerged during the preliminary analysis of word search are represented below.

Fig. 1 Word cloud with emerging themes

The themes start to present themselves from the initial analysis. What became evident from the start of analysis was the emotional impact dyslexia caused the participants. The participants often questioned their capabilities, this would appear to indicate that they often draw on their weaknesses and this affects their self-esteem. They rarely spoke of their accomplishments. The experience was a very emotional experience personally. I was amazed at how the participants viewed their capabilities. From a teachers' perspective, the participants are all very talented and each display unique qualities, the fact that they felt they would need to *apologise for being dyslexic* distressed me. The students themselves all talk about the students in their class as 'the normal students' which would lead me to interpret there is still a 'stigma' associated with dyslexia.

One of the students strategies was the use of colour post it notes to categorise modules and urgent tasks; I adopted this technique to code emerging themes. In the beginning, I had over twelve themes from the student's interpretations; I went back to the data to

focus on words and feelings that displayed most impact from their experiences. I put the repeated words in a word cloud to visually see themes emerging, such as school, emotional feelings, literacy and technology. There is a visual representation of how often the words are used by the size of the letters (see Fig 1). The wordcloud enabled me to explore a visual, textual image of the most prominent themes. It is not within the scope of this study to discuss all the interpretations, through my data analysis I came up with six themes with relevant sub themes.

Six thematic areas

As a result of my findings the thematic areas all involved experiences of learning in school and in Higher Education. There were six thematic areas identified:

- Learning experiences in school

- Academic impact of dyslexia

- Technology

- Support

- Awareness

- Emotional impact.

The emotional impact of dyslexia was prevalent throughout the interview. The experience of many support networks throughout their learning journey in school and higher education factored heavily. Students' experiences of technology as stated in the literature differ slightly from what you would expect. Lack of awareness on dyslexia from students and staff also emerged with strong data. Throughout the interview stage, students offered different ways to help/ improve their learning experience and future students on the programme. The latter is discussed in the recommendation and conclusion chapter.
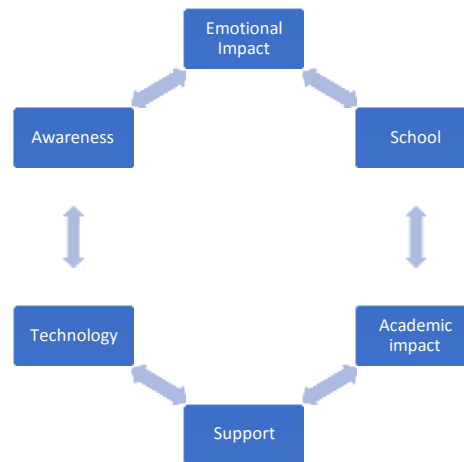
Fig 2. Thematic areas

4.2 Learning Experiences in School

As discussed in chapter three, I have decided not to distinguish participants by using the years in which the participants study. I have changed their names to protect their confidentiality and anonymity. They will be referred to as Pia, Ally, Tia, Fay and Karla.

The first theme that emerged was the students' experiences in school, these included both negative and positive experiences. Students' self-perceptions develop in school. Teachers and peers' attitudes can be detrimental in shaping their confidence. This section considers negative learning experiences in school, positive learning experiences in school and carrying school experiences into HE.

Negative learning experiences in school

The negative school experiences mainly related to the literacy. This theme captures a combination of feelings experienced at school encompassing emotions of self-worth and embarrassment. Karla had experiences that carried over into college life, she commented:

> *In school letters and numbers, I'm not attracted to it at all, I found those skills very hard, I hated reading since the sixth class, I did not read out loud ever in*

> *school and numbers, and letters are really hard, my essay writing is really*
> *bad, I had to study so much.*

Tia also found maths and essays challenging in school. Ally had left school when she was thirteen, her memories of being put into a remedial class added to the stigma she experienced from her peers and led to some persecution from students in school. Thankfully segregation of students with learning difficulties no longer happens. Fay described some experiences when she started secondary school. Fay suffered extreme humiliation on several occasions she remarked:

> *The first year in school I was embarrassed, my English teacher knew I was dyslexic,*
> *she used to circle everything I spelt wrong in red pen, she used to belittle me. I was*
> *constantly compared to my sister who is real bright and can spell anything; I left that*
> *school.*

The social barrier Fay's teacher exhibited led to Fay's low expectations of school this affected her self-perception and anxiety. However, Fay displayed determination and personal strength, she refused to return to *that school* and sought acceptance into a different school. Fay's negative experience followed a very positive experience where a *great guidance counsellor* saw her artistic potential and still supports her to this day.

Positive learning experiences in school

Fay's new English teacher used a much more constructive approach to encourage learning. Fay went straight on to college from school she observed: "*I shocked myself*", the perception from the participants that they somehow are not worthy. Tia had a particularly supportive schooling. The participants had help with their written work and correcting errors from teachers, family and friends. I believe the dyslexic student's environment and the encouragement they receive from the people in their lives can build and shape their learning. Brunswick (2012), identifies the importance of supporting those with "individual difference" and educators play a vital role in providing individual support thus ensuring dyslexic students can succeed in the educational system (p. 21). These are values I have supported throughout my whole career as a manager and creative director. Motivation, encouragement, support and respect build confidence which in turn promotes inspired and creative ideas which, in my opinion best practice for all involved.

Choosing Visual Merchandising

It was apparent to me that participants each showed unique learning strategies and a strong sense of their knowledge. It was evident that their determination was to study a creative art based subject, a subject they were all passionate about. Tia spoke of her love for doing art in school; *I was really good at art in school that's where I got higher marks, I was no good at maths.* A similar driving theme at interview stage was the student's reason for choosing the VM&D programme, Fay, Tia and Karla all expressed a love for art and being creative, Fay remarked:

> *I was always really good at art in school, and bad at everything else, I love being creative, I love doing the windows, that's where dyslexia don't matter anymore like when you're doing creative stuff because you don't have to write, I think our windows are like the art class of school, that's when I never felt like I was working when I was in art, it feels like hard work the rest of it, the windows and the practical stuff doesn't, that's why I need this.*

Karla also spoke of her creativity:

> *In school, I'm not attracted to letters and numbers at all, I always found those skills really hard, I did art since sixth class, I knew I always wanted to do something creative, people say those who have dyslexia have some other thing like singing or the arts and stuff...are good at something else rather than the numbers or reading stuff, I'm more hands on, I'm good at art.*

A lot is written on the association with creativity and dyslexia, some will have a natural flair for the arts and creative subjects (Brunswick, 2012; Reid, 2009; EDA, 2014). Often the participants put themselves down, they draw attention to their weaknesses, *I was no good at maths... I'm bad at everything.* When the participants leave college and go on to work in industry, they will have to promote themselves as professional confident visual merchandisers. They will have to learn how to sell their ideas to potential chief executive officers, managers and clients. They will have to merchandise product to maximise sales and stand by their decisions. "The challenge for teachers is to ensure that students maximise their potential" (Brunswick, 2012 p. 52). A strategy I have used for nearly two decades is to encourage and motivate self-confidence. When a person feels comfortable and confident it will initiate inspiration, this aids people to reach their full potential. It also promotes self-

esteem and job satisfaction. As teachers, we need to adopt these strategies, we need to motivate the participants by highlighting their talents and strengths.

We need to remove the barriers that obstruct building students' confidence.

Carrying school experiences into HE

All of the participants' early school experiences stayed with them into higher education. I believe that this had an effect on their self-esteem and why they often questioned their capabilities. Pia speaks of her early days in college:

> *After secondary school, it took a while to learn and figure out how to do things, I often feel two steps behind, learning certain things even a joke, those little things become bigger and bigger, it's not easy for normal people, but when you have this on top of everything else it really sets you back, sometimes I think I'll just work in a café it'll be easier.*

All the participants excel creatively, and it was quite upsetting to see them put themselves down. As mentioned earlier in the research Fay had a stressful experience with a teacher drawing attention to her work in front of her peers,

> *She knew I was dyslexic I had given her the form, and she'd write in red pen on top need to work on spellings, this was in that school, I'm not 'really' bad you can make out what I'm writing.*

Brunswick (2012) states dyslexic people are continuously held in contempt for things like spelling or punctuation mistakes; she goes on to argue that you cannot compare how much a student understands by the standard of their writing. All the dyslexic participants and perhaps a majority of people have the assumption that to be successful you need to read, write and spell well. I was very fortunate for the opportunity provided by the students to share their very personal and sometimes traumatic experiences with me. This theme captured the participant's intense feelings of self-deprecation and often that in order to be deemed clever you have to spell well or only study literacy based subjects. Empathy and interest from *a great guidance counsellor* were the turning point in Fay's life. This student-centred approach needs to be credited. Showing compassion and seeing beyond literacy, Fay's teacher encouraged real raw talent.

4.3 Academic impact of dyslexia.

As mentioned previously, experiences in school weighed heavily on the participants, for some these transferred on into college life. There were a variety of sub-themes regarding the academic impact of dyslexia on the VM&D programme. I broke these into, literacy, student handbook & assignment brief and time management. The emotional impact profoundly influenced all the themes.

Reading

The data analysis strongly identified that some students had problems with reading; this became apparent early on in their college career with the application procedure into college (the CAO). This was an extremely anxious experience for four of the participants. Karla expressed:

> *I would take forever doing application forms I hadn't a clue, it's really confusing, I didn't know how to fill out the CAO; my mum didn't know either, my friend is doing business she's really good she's really smart and bright…*
> *I always put myself down.*

Pia had an immense level of anxiety with the CAO, and the process took over four years to complete:

> *The application procedure was the most dreadful thing I had to do in my life, it took me four years to apply to the CAO, I had no idea, it was gibberish, I needed someone to help me out, the CAO is all the same colour all the same lines, the CAO is gibberish, I absolutely needed help it took four years to get to grips with the CAO, both my parents are dyslexic so couldn't help with the form, it was really hard I went to the library they didn't know how to help.*

Reading and filling out forms proved a daunting task for some of the students interviewed, Pia spoke of:

> *Being two steps with all reading material, even setting up a bank account is stressful, also when you're looking for grants they're very hefty in writing too, I'd ask the DSS to go through it but they wouldn't because it's a college thing.*

Karla and Tia hated reading out loud in school. This preoccupation with reading out loud in front of an audience affected the participant's presentation mark. Karla also felt strongly about presenting in public: "*I hated reading since sixth class; I did not read out loud ever! I struggle to explain stuff, my vocabulary, also power point, obviously when you leave you have to present, it's terrifying!*" Contrary to belief, dyslexic students would prefer to present,

Tia commented: "*I prefer not to do a presentation, I sweat, I prefer an essay… I don't like presentations no.*"

There are mixed views from the dyslexic students to present or not to present. Two of the students prefer to present instead of writing an essay. One tutor offered this as an opportunity to help the students who struggled with writing; this option needs to be standard across the board. From a tutor perspective, the dyslexic students' oral expression of their craft is far superior to the written synopsis of their work. Symonds, as cited by Hargreaves & Crabbs (2016), state that creative students' written work does not resonate with their artistic talents. Symonds supports students' oral representation used for their dissertation. From personal experience (over twenty years) this practice is more representative of industry practice in VM&D and needs to be comprehensively adopted in Education spheres also. Perhaps a question for further discussion is how can we make the programme more relevant to industry practice (VM&D)? Should we consider or prioritise individual graduate attributes that have more relevance to industry practice? We should review promoting these attributes instead of trying to fit into educational practice which sometimes creates barriers for our creative lateral thinkers.

Student writing

When the participants were asked why did you choose the VM&D programme the majority commented that a lack of skill in spelling and essay writing as the dominant reason for choosing the programme. The idea of writing a thesis caused some of the participants a lot of anxiety. They believed they could not survive such a task. Pia spoke of her fear with writing, "*I knew my disability would be an issue if there were writing involved or a thesis, that's what always set me back in education before.*" Most of the participants did not expect to see some of the more academic subjects offered on the VM&D programme. Fay honestly stated:

> "*If I had of known there was going to be essays and all that writing I wouldn't have done the course, I thought it was all practical and making stuff, that's what I love, that's what my guidance counsellor told me, she didn't know.*"

Karla was confused when she first started the course, she too imagined a more hands-on programme, Karla remarked:

> "*When you're telling us, we are doing business and history; I didn't expect any of that, I understood we would be doing the practical class obviously, I thought it was only mannequins, it's clear after a while when the lecturers explain.*"

Fay spoke of all the students in class and her dyslexic peers having a difficult time with the lecture-based subjects:

> *"I struggle with History and Theory of VM so do the other students that have dyslexia, they're real lectures, I went through the notes, and I don't even understand half the words it's not just me it's the other students too, its real content heavy, it's really difficult I couldn't understand it."*

From an industry perspective, values I look for when recruiting potential new visual merchandising staff are; work ethic, attitude, creativity, talent and enthusiasm. Ally is one of our most talented VM students, her attention to detail and innovation is outstanding. However, her struggle with literacy is a huge barrier and causes her immense stress:

> *"Sometimes I might misinterpret something and get it wrong. I can't miss out on classes I can't make it back from anyone else's notes. Sometimes my ability to interpret information has gone by the time it's spoken, and I've sorted it in my brain and written it down, the class is miles ahead, once I'm lost I'm gone, I'm completely gone."*

Brunswick (2012) argues this has nothing to do with their degree of intelligence; they should not be judged on this. Western society determines success with literacy and exam scores, these methods do not or cannot ascertain how talented and creative a person is. I believe policy and bench marking certain subjects needs to be modified to realistically fit with real life industry practice.

Student Handbook & Assignment Brief

Four of the participants had issues with the content and sheer volume of the student handbook, Fay stated:

> *"I just flicked through, it's very dense, I didn't read it, that would be a nightmare for me, it would take me three weeks to read it, it's a lot to read… confusing the long writing, I don't know if it is necessary to have all that in it, it deters people from reading it."*

All participants had difficulty with the briefs which are given out as a primary assignment. Tia often spoke of using a more visual media and more structure to deliver the assignments:

> *"Everything is just a clutter, it needs more structure and nicely separated it's just a mess, I can't visualise it, I had to be present when the brief launched I had to be there if I wasn't I'd be lost, the oral explanation is useful."*

Karla resourcefully found what she felt she needed in the handbook she commented:

> *"I went through the equipment and the marking, it's a lot to read, I went to the index and went to what was important, the marking is off it's confusing where the marks are going, there's just so much reading to do."*

The participants' experience with literacy presented itself uniquely. One hated reading out loud, one hated essay writing, one preferred to present rather than write an essay. Each participant had their strategies to aid their learning. They all possess a determination to succeed. Several studies show (Hargreaves & Crabb, 2016; Brunswick, 2012; Reid, 2009; Reid & Elbeheri, 2009) most students with dyslexia have characteristics regarding discovering and creating individual strategies and techniques that facilitate their learning.

Time management

Personal organisation is often an issue for the dyslexic students. In this case, the students struggle with time management, and can often forget to hand in work or miss deadlines. The college experience with time management can be overwhelming and result in students falling behind or failing modules and having to re-sit exams or resubmit work. Fay struggles with using her time efficiently she commented:

> *"I'm bad at time management… I'm pure scatter brain; I try do essays early because I know it takes ages for me I get a couple of parts a day done because it's all on top of you, sometimes I leave things to the last minute."*

Pia also struggled with organisation which has a knock-on effect on everything she commented:

> *"My time management in school was much easier you get an hour homework you're done, not like in here, stress if you don't time manage, I've made myself ill over the last two years over my time management."*

Karla had a similar comparison to school with Pia:

"It's not like school; no one is going to tell you what to do anymore, because it's on us, if you don't do it your down on yourself, trying to balance everything (hands onto face), my organisation skills are not the best."

Hargreaves & Crabb (2016) state that the demands of college life differ significantly to the regulated environment of a school and teachers should have alternative strategies and supports to offer. Fundamentally, the responsibility lies with the student and how they approach college life early on. Their initial approach to study and setting up strategies is detrimental to their success. They need to share their concerns with their tutors, avail of supports offered by DSS from the start.

Ally explains that her short-term memory affects her learning. She explained another barrier to learning was that some tutors did not provide notes before or after class. Tia's exasperation with keeping on top of note taking and listening she remarked: "*when the lecturers are going too fast when I have to take notes I have blanks I can't keep up."* These are all simple things that could be rectified by the tutor. The disability information and guideline for lecturers and staff "What can Lecturing Staff do to support these students?" is sent by the DSS to tutors teaching students with a disability. It provides some useful recommendations to help dyslexic (DIT, 2017b, see Appendix 9 for list).

AHEAD (2015), BDA and the DAI, encourages tutors to vary their teaching to cater for the diverse student cohort. This quite simply is adopting the Universal Design for Learning (UDL) which promotes learning for all and equality. The UDL model supports equal access for everyone not just people with disabilities. Its design framework is based on a model of learning variability rather than highlighting disability (see Appendix 1). In Art & Design Colleges these are simple strategies that from a creative perspective should be encouraged. (Rose, Meyer & Gordon, 2006, 2014).

Assessment

The assessment work on the VM&D programme uses continuous assessment, a method I believe suits the diverse student body. The students also receive formative feedback from all tutors throughout and at the end of each semester to highlight strengths and possible areas for improvement. Pia comments: "*continuous assessment works for everyone, VM is very flexible, and if you have lecturers that are understanding as well, absolutely, you can talk to anybody about how you're doing."* Fay is also pleased with the continuous assessment she remarks:

"I LOVE IT! Both pros and cons, the con is you have to do it but it's a pro, I'm dreadful in exams. The more you continuously get marked the better, I can know everything then I go into an exam and know nothing, that's what happened me in history, I'm really good at history, I spent ages doing one essay and forgot about the other two, and there were fifteen minutes left, I didn't get any extra time I just got my own room, I was raging."

Fay also appreciated the formative feedback from tutors she commented:

"I like when someone gives you constructive criticism, I know I'll never spell eclectic wrong again, you only ever remember the negative, I like when they say you could have done this better or this works well, that that's what you're there for."

Continuous assessment suits Karla she mentions:

"I love that, I'm so happy, even though I did very well in the leaving cert I studied so hard, I hate it, it was so wrong… we have Christmas and Easter assessment which was continuous it's better… because I felt all your hard work over the course how you perform will be based on not just one exam, and then it could go just completely wrong, that's why I love continuous assessment."

Tia also appreciated the formative feedback and said:

Yeah, it's good to know where you're at because there are places that you're falling down that you don't realise so that situation on what you need to do better… that's where I'm doing better now because of the feedback."

Karla commented on the feedback: "*yes, it helps you know what to improve on, my research and power point, is where I was told I came down, so I needed to work on what was bringing me down.*" The response was unanimous. All appreciated the continuous assessment in the practical subjects. The students all appreciated the feedback they receive but tend to focus on the negative more than the positive. Perhaps this is something I need to bring back to discuss with my colleagues. We need to concentrate more on the positive rather than what they perceive as negative. There are exams in some of the more academic subjects but as mentioned some of the tutors try to modify how the class was structured to reach all the students.

4.4 Technology

The second theme that emerged, as a result of my analysis of the data, was the use of technology. Technology is one of the most valuable tools recommended to open up a wide range of possibilities for students with dyslexia. Educational software and assistive technologies propose to enhance learning, however, for some of the students, it can be another onerous task.

Pia stressed *"people have a hard time controlling technology… there are so many emails it's very easy to miss something."* All participants stressed how important it was to have their laptop. All of the participants had issues with Computer Aided Technology (CAD), they expressed a huge amount of anxiety learning the module.

Two students didn't have a personal computer (PC). The option of using the college computers caused concern and added to the dyslexic student's workload. Space is limited, computers are limited, and timing of classes can hinder when and where you access them. To download any software, you need to get permission from IT. The students need to access their work anytime from their PC's, the alternative of obtaining their work when on the campus was not a welcome choice. Karla didn't have a laptop at the start of term, she spoke of the assistive technologies recommended by the DSS:

> *"I haven't used them, I didn't have a laptop at the start of the year, I got it a few weeks later, I was supposed to go and get the apps, but I didn't go in the end, there are a few apps, three apps, google drive, it's just the apps they recommend, I'm so bad at technology, I'm so glad we don't have web courses it's so confusing."*

Pia also stresses the importance of a PC:

> *"Lucky, I had my own laptop if I didn't have my own laptop I wouldn't be able to do it, also I use my I-pad and phone to look up work I couldn't understand, my notes can be quite messy so they tidy me up, and manage my time and it's all compact."*

Fay also valued the importance of her laptop and commented:

> *"I had my laptop when I started I couldn't survive without it, it's a nightmare when you save anything on these computers you need to be back here to access it, it's hard, I'd rather have it on my one."*

One student could not afford her PC till the third year. This significantly impacted on her work. She was informed at the end of the second year "you are not at the level you need to be at for the third year". Ally went to the assistive technology advice meeting

at the disability office, but she was unable to download the relevant assistive programmes because she didn't have access to her device. Karla did not have a laptop for a few weeks and missed the opportunity to download the assistive apps.

Assistive technologies

Mixed responses to the assistive technologies were offered. "*Read and Write*" software is recommended by the assistive technology officer for dyslexic students. The "Read and Write" software provides dyslexic students with the ability to translate text to speech, grammar sequencing, phonetic spell checking and word prediction. Karla stated: "*I haven't used them.*" Tia like all the students found her solution, she remarked:

> "*They put the software on for us its Read and Write I didn't use it, I found an app called Grammy, even if you're on Facebook, they highlight what's wrong, they give you correct sentence structure, it's on your browser, I told people to use it.*"

Ally was the only one who welcomed the software offered, Ally commented:

> "*Learn and Write, this is the best one, you need your laptop, Learn and Write was fairly easy to get around, that's another thing finding your way around these programmes is time consuming, and with my learning disability it's like a jigsaw and if I miss a dot I cannot make the full picture, if my brain doesn't make sense of it, that sends my brain off into different avenues and energy... resources and time spent researching when it could be something simple.*"

The assistive technologies offered by the DSS to the participants had mixed responses. Some preferred to find their own software to help them. The students all had issues with technology, there is an assumption that students of today are all tech savvy. In this case, the participants were certainly not comfortable with technology, this is a huge barrier. Fay stated: "*it's like another language.*" Another assumption is that students will all have their own laptop or device or if not they can easily access the campus facilities. In this case, it was certainly not the case, both caused barriers to the transition into college life and added to their stress.

Computer aided technology (CAD)

For the case of the VM&D student's CAD appeared to be a subject they all found difficult. Most visual learners understand better when exploring. However, many factors hindered the luxury of study through inquiry in CAD. Ally struggled with

technology and found CAD particularly challenging, "*CAD is a steep learning curve particularly if you're not up on technology*." Fay was visibly upset when she talked about her exasperation with CAD:

> *"The only thing I cannot learn on this course is CAD, I just cannot do it, it's horrific, it's just a hard software to download onto your laptop, it's so hard with such a big class, you're handed a sheet with forty different things, you're trying to do one thing and you've missed six things, I'll just pay someone if I ever become a VM."*

Fay articulated her frustrations with CAD so vividly:

> *"If you knew how to do it, it would be much more enjoyable because you keep going and you keep not knowing, it's so annoying it's like a language, I was exempt from languages in school that's what makes it so difficult, I did Irish for six years and couldn't understand it, I feel like I'm on a return to school all over again."*

There is a need to constantly review practices to ensure teaching is inclusive. Promoting tools and technologies that can make practices more accessible for dyslexic learners should be standard (AHEAD, 2015). There should be policy available on assistant technologies, where integration of use should be networked and available for 'all' users. Technology has the prospect of optimising the learning experience of the students. The use of multimedia has the potential to introduce important options for the dyslexic students (Riddick & Brunswick 2012; Reid, 2009; Mc Loughlin & Leather, 2012).

A significant finding during this research was the fact that technology was an issue. Recommendations in the literature recommend embedding technology to enhance learning (Johnson, 2015; JISC, 2015). Contrary to the opinion held by Johnson and JISC, technology caused the most anxiety and frustration for the dyslexic students on the VM&D programme. Similar to all the dyslexic students interviewed, Pia seemed to put herself down and somehow thought that she was at fault for not understanding, "*People like me have a hard time controlling technology.*" Fay felt demoralised with respect to technology, indeed all students interviewed displayed fear and lack of confidence and self-esteem when discussing technology: "*It was difficult with dyslexia all that technology; I'm not good I find that difficult, I don't know if it's because of dyslexia or I'm ancient or back in the ancient times.*"

Adams & Brown, (2006) argue that dyslexics learning one to one with a tutor is perhaps a better fit. Phipps, Sutherland & Seale (2002) understand time is an issue with dyslexic students and is a waste if technologies obstruct learning and cause demoralisation and non-accomplishment. Using technology needs constant training and updating to ensure greater success (Philips, et al., 2002).

4.5 Support

This section considers various supports the dyslexic students discuss during the interview stage; there are three sub-themes: disability support service, tutor support and peer support.

Disability Support Service (DSS)

The enrolling process on how to sign up with the DIT Disability Service proved cumbersome for some of the students. Karla stressed: "*the signing up bit it's very long, there are lots of steps it's really confusing.*" Fay went down in person because she'd rather not do it online. Pia and Ally emphasised the added expense of getting reassessed to apply for disability support added to the apprehension of transition into college for a dyslexic student. Ally said; "*you have to get reassessed for something that clearly isn't going away it's very frustrating.*" When Pia signed up, she found the process fine she said:

> "*It's quite good, it's colour coded, and you could see a picture of your disability officer, I got an appointment straight away because I was in first year, but after that it dwindles away now it takes three weeks to get an appointment, by the time that comes around the assignment is gone, it's really bad.*"

Reid (2009) stressed that students need to be in contact with people and staff who can support and advise throughout their studies and not just after enrolling. The DSS offer resources to everyone who sign up to the DSS through DARE. However, some students did not know these resources were available. If they do not sign up, they do not get the help and supports available. As outlined before some of the participants have a hard time handling technology. Perhaps this is a contributing factor. If statistics for students with disabilities are believed, resources are going to become a bigger issue. Students with disabilities now make up 5.2% of the total student population, and

this number is growing (AHEAD, 2017). The already under-staffed and under represented DSS will come under immense pressure.

Tia was not aware of entering for the DSS early in her college journey because she didn't come through the DARE scheme. Tia and Pia both commented that in order to obtain a meeting you need to book two weeks in advance. Tia was discouraged to gain the disability supports offered because you need to reapply to the DSS every year. Tia refrained from applying this year she remarked: "*it added to pressure of work and stuff to do, and it's not worth the hassle.*" The Learning support officer (LSO) and the DSS provide a three-day event for students with disabilities who apply through DARE. Karla and Pia were the only participants that attended. They found it useful. However, they had forgotten some of the topics discussed as time passed. Pia and Ally missed out because their application was delayed due to being reassessed. Tia did not get into college through the DARE scheme, so she was not aware of the event. Fay applied through the ACCESS route, therefore, registering for the DSS was delayed because of lack of awareness. The learning supports offered were not utilised by the participants. Ally was the only one who used the *Read and Write* software all the other students had their own strategies and supports. The LSO sent two short clear emails informing students about learning support meetings. However, some of the students were not aware these were posted or perhaps the dyslexic students had missed them and possibly other important information sent. Ally spoke of receiving email from the DSS:

> "*No, I don't get emails from the DSS, but there could be something out there emailed that I missed because a lot of this stuff is delivered through text, that's basically my learning difficulty, you get so many emails you miss some information, it's so overwhelming, you get all these emails and all this information.*"

All students could see the services were stretched to maximum. Karla had to re-submit her assessment report twice. The participants were very complimentary once they got their appointment. Karla spoke of her experience at the DSS: "s*he is really nice she did an eye test because the words jump, you get an overlay colour to help, this is good, the words don't jump as much, it's easier to read with it.*" Fay also kindly said, "*she is so lovely she is so nice, she tries to help.*" Ally could see how understaffed the DSS were and commented:

> "*You can see they're under-resourced and they do the best they can for the students, I've always got a reply back. I've stopped trying to access them, the*

fact the campus is broken up it's very difficult, there are only certain times up here you can visit it doesn't always suit, I found it difficult timetabling them in, I cannot miss class, or I'm lost."

Pia also had issues with the accessibility of the DSS and said: "*I would use the supports more if they were nearer*." Ally stressed: "*BUT! when you do get there, they are very supportive, and they try to help as much as possible."* Karla refrained from utilising the support offered with regards to practicing her presentation techniques, which she has significant anxiety with. She said: "*I don't like a fuss, she emailed me to rearrange when it would suit me, she's really helpful."* All students welcomed the credit advanced for photocopying.

My interpretation from the dyslexic students interviewed was that they often get overwhelmed and anxious when there is something new. Certainly, starting college is a stressful time for all students. However, the dyslexic student's self-confessed challenges with organisation skills, short term memory and literacy difficulties inevitably pose as a huge barrier to the transition into college life. On starting college, the dyslexic students are expected to sign up to the DSS, fill out forms (for various grants). They are advised to attend dyslexic meetings and assistive technology meetings on top of learning about their new college life. Familiarise themselves with a new timetable, new subjects, new modules, new technical terminology, finding classrooms, becoming familiar with a new campus, meeting new people and meeting new lecturers. How are dyslexic students expected to remember, keep up and stay up? Another startling finding and costly barrier to the dyslexic students is, in order to get the DSS supports you are required to provide the dyslexia diagnosis with the original educational assessment and supporting document by an appropriately qualified educational psychologist (DIT, 2017). In order to get reassessed it costs the students five hundred euro and this is a huge unexpected cost. Pia commented:

"I hadn't gotten an assessment since I was fifteen, I had to get one, and it cost a bomb, five hundred euro, it's really bad, and some people are really struggling, it did make some things easier but five hundred?"

The dyslexic students are required to sign up every year to receive supports. Surely this barrier is an added workload for all involved. The additional cost of getting

reassessed for something as Ally said "*that is clearly not going away*" is a tremendous burden for the students and their parents.

Peer support

There was a consensus among the participants that they felt included in the class and supported by their peers. Ally said, "*there's no problem they don't have an issue with it.*" Pia had a pleasant experience with one of her classmates she remarked:

> "*One day I was falling behind, and a student sat down beside me and said "do you want me to go through that with you?", it was something so simple as reading something to me, it gave me such a lift, there needs to be more awareness for everyone.*"

Having their peers to talk to or work with can make a difference in a student's wellbeing. Their peers' attitude can affect self-motivation and engagement in the class.

Tutor support

The students interviewed in general felt supported by their tutors. Perhaps being interviewed by a tutor they felt compelled to say this. I assured the students their information in this study would remain confidential. Tia remarked: "*lecturers, are very encouraging, if they're aware they help you much more, they have time for you.*" Karla spoke about the motivation one tutor shows: "*she always talks me up when I always put myself down.*" Ally was grateful for the smaller class sizes and said: "*this is the great thing about this course it's not like a university where you go into a massive big room with five hundred million students, you have direct access to your tutor.*" Ally commented, "*some have more understanding than others, some think it's an excuse, some understand you're struggling, I don't know whether they think you're lazy.*"

The fact that the DSS was only on campus once a week was an issue. There was as a suggestion that perhaps the DSS and LSO emails might not be seen as the students find it hard to keep up with all the correspondence. One suggestion was to colour code emails so they know instantaneously who it's from i.e. yellow - the DSS. There was also a proposal to colour code the library in their department, i.e., art green, etc.

There were a couple of students corrected about punctuation and spelling in front of their peers. This impacted negatively on participants. As a result, their peers were made aware of their dyslexia without their consent. The humiliation of past experiences seemed to register again. The students went on to say perhaps it was down to a lack of their tutor's awareness. Colour coding was presented by students, perhaps a different colour when sending emails to highlight the different modules. Pia uses orange to highlight urgent assignments and work. Audio correspondence was also suggested as sometimes the students miss vital information.

4.6 Awareness and perceptions

Because dyslexia is a hidden disability, tutors and students may not be aware that one in ten students will have some form of dyslexia (AHEAD, 2015). Fay commented, "*it's better when everyone knows, I forget that people don't know, I suppose you can be a crap speller and not be dyslexic.*" Fay then goes on to discuss, "*people sometimes think it's something that can be overcome, but it can't.*"

This section considers perceptions on tutor awareness, class student's awareness and suggestions for peer mentoring.

Tutor awareness

There was a mixed response to tutor awareness from the participants. Tia said: "*no… some lecturers don't know.*" Fay commented: "*some have more than others, some think it's an excuse, and other lecturers understand you're struggling.*" Ally had an overwhelming negative experience from a tutor. The tutor had to be contacted by the DSS to remind them that Ally was dyslexic. Ally had to inform a tutor a second time through the DSS that she was dyslexic:

> "*I can't help with my punctuation and spelling, please don't highlight that as an issue for me when you know, I felt there was a stigma OH here's another one, I had to emphasise I do have a disability I genuinely do, I have to work really hard I'm not using it as an excuse, I'm just making you aware of it.*"

There was an undeniable anxiety added to the fact that tutors were not aware students had dyslexia and students having to defend themselves, Ally commented:

> *"I had to get A to send out my dyslexic report to tutors; I felt I had to tell tutors I was dyslexic and having to explain, I felt they thought, "here's another one", I had to emphasise I do genuinely have a learning disability."*

Discussed by some students interviewed was the need to encourage awareness among staff and students and to be respectful of different students. Pia mentioned: "*there should be a general knowledge some people are different, some people are good at different things, this should be taught across the board."* There was a suggestion to resend a refresher email to remind tutors about the dyslexic students in class, and more importantly any new tutors joining the programme. Tia said: "*I don't like a fuss, I'm not sure if A or B know, I understand you could miss it, maybe someone could just let them know, perhaps a reminder to tell them who has a learning difficulty."*

Ally remarked, "*it needs to be made aware at the very beginning if there are people with a disability."* Ally strongly suggested that too much time passes before supports are put into place leaving the dyslexic students at a disadvantage to their peers. Brunswick speaks of the dyslexic student's environment, the people in their lives and how everything around them can build and shape learning. I believe we are all equal; it is up to everyone to try to remove barriers that can inhibit inclusive learning, again my industry background promotes teamwork, working together and playing to our strengths.

> "Moving back to a constructionist perspective about the development of knowledge, the way people make sense of such difficulties will be related to the way important people in their lives-employers, teachers/lecturers, parents, peers respond to these difficulties." (Brunswick, 2012, p.16).

Class students' awareness

The dyslexic student's perception of peer's awareness on dyslexia was mixed. Karla expressed her viewpoint on how her peers in class don't notice her dyslexia: "*you don't know by hearing me, no one said, you're a bit stupid, it's fine."* Tia knows of four other dyslexic students: "*there are four of us it is very open, no one is ashamed.*" Pia is a very talented artist, and she received some negativity towards her dyslexia she spoke of: "*some students are a bit snobby about it, I can't spell this word, and I don't get this, you try to explain the frustrations are unbearable, but there's always going to be a certain percentage like that."*

Pia was encouraged to tell people she was dyslexic by her dyslexic peers. Pia also highlighted the respect she has for everyone and felt it was only fair that she explained

to her peers and tutors: "*tutors and class peers need to know when you are working together.*" Awareness from Fay's peers of her dyslexia was very positive: "*there are more dyslexic people in our course, everyone understands here because we are creative, it doesn't matter here, they understand, even if I ask a thousand things.*"

Peer mentoring

Pia remembers meeting a dyslexic student when she first started, and her outlook on life was very pessimistic, her pessimism gave Pia the impetus to turn her life around and become more positive. Pia had a turning point in her life from that moment she commented: "*that was the beginning of me being a lot more positive in what I have and using it more creatively.*" Ally welcomes her dyslexic peers understanding her and providing information she may not understand, she said: "*it's like a different language being sometimes spoken, but it's how we explain it to each other, we just get each other, it's nice knowing you have the support.*" Pia has an enormous amount of empathy and goes out of her way to help all students she mentions:

> "*Maybe an opening day a small meeting for an hour, saying you are all part of DSS, meet if you want on such a time... it would be nice if you knew then you could help others, now I am in contact with first years and 2nd years, it's nice if you've gone through it to help someone that's going through the same thing as you.*"

After learning about the different needs of the students, one tutor has made their class more inclusive for students' learning with particular learning difficulties. He splits the class in two and ensures the rest of the students remain quiet until class is over. He also sits with the dyslexic students and reads the questions if they require. This method should be shared with other tutors to inform best practice. Nind et al., (2004, 2014) and Hickman & Brens (2014), highlight the value of working together and learning from our peers and colleagues.

I would encourage the social constructivist value of promoting more peer mentoring and a community of practice among the dyslexic students and tutors in DIT. Another way to share strategies and develop a peer support network (Hargreave & Crabb, 2014) is to integrate best practice for the inclusion of all students' learning. This should be everyone's responsibility. Riddick (2012), encourages suggestions from the students with regards to the LSS. These include a "buddy" system, inviting students who have experienced learning with specific learning difficulties, sharing their strategies and

challenges with the new recruits. DIT's strategies and supports in place may not be enough. Management, staff, teachers and students in the Creative Arts Department DIT as a team need to drive awareness and best practice.

4.7 Emotional impact

The unknown effects of learning with dyslexia cannot be discussed in isolation. The emotional impact directly associated with each learner and their personal experience of pressures associated with learning and the class room coincide (Reid, 2009). It is apparent throughout all of the interviews the hidden effects, as well as the noticeable effects about writing, spelling and reading, has on all the participants.

This section will look at negative emotional impact and positive emotional implications.

Negative emotional impact

Fig 3. Emotional impact words in this case

I put together in a word cloud using the common words associated with the negative emotional impact of this case study. The result is powerful. I highlighted the words that had the strongest reaction in the larger font (See figure 3). The emotional impact was evident in all the themes discussed. All subjects displayed emotions. Literacy and technology based issues caused the strongest negative emotions and in some cases extreme anxiety. I will try to give a different account touching on various feelings

from the student's perspective. To start with Pia had difficulty with some of the assignment briefs she remarked:

> *"Some are fully loaded, it took a long time to analyse these, there are live wires sticking out all over the place (points to brain), everything is coming at once it almost gives you anxiety as well, I'm not going to lie I've got a lot more anxiety and I was diagnosed with anxiety, so it's quite hard."*

The emotional impact on the participants related to loss of confidence, anxiety and low self-esteem. Studies on the emotions and experiences of dyslexic people in education are rare.

Research carried out on dyslexia is usually from a professional objective (Brown & Adams, 2006). Pia spoke of apologising for being dyslexic, and felt that she always had to explain herself:

> *"At first, I apologised for being dyslexic, there's always that worry, I spent my whole life worrying, some people dumb it down for you, I'm not dumb I understand just sometimes I might ask a second question, sometimes just explain it again, please."*

The first-hand accounts I experienced from the participants perspective were emotional and inspiring. The participants' characteristics each portrayed resilience and determination to succeed. Pia commented: "*it's hard when you get really low... but if you can bounce back, it's fine.*" Ally commented: "*adaptability, you get through it, you know you can survive with it and learn with it and work around it.*"

Positive emotional impact

I will end this chapter on a positive note, letting the dyslexic students on the VM&D tell you how the more rewarding experiences of visual merchandising classes make them feel. I will provide the opportunity for the dyslexic students on the visual merchandising and display programme words speak for themselves. With regards to her place on the programme Karla remarked:

> *"I love the windows and making stuff, I'm so happy, believing in myself and how I actually managed to do it, everything I've done for myself, to travel in,*

to do all this work and get everything done on time… that's my biggest achievement!"

Tia noted:

"The windows! That's what pushes me, I'm more hands on and visual, I express myself visually better than explaining it, when the windows work that's what gives you your little boost."

Pia commented:

"The most rewarding experiences for me was getting something new to develop, exploring how to get from A to B being as creative as possible and then actually making what you have designed seeing it come together, pushing yourself to do new things to have new experiences and then seeing it become real it was very rewarding. It's also nice to get feedback when you have put hard work in, not in the way of 'Oh tell me how good I am' but listening to others opinions on something that you have created and watching others get inspired by your work is magical!"

Fay's comments throughout the interview struck a chord with me; she has a unique ability to let you feel what she feels:

"I love making things, the learning how to group properly, I love doing the windows, I love being creative, I love when you get to be creative, that's where dyslexia doesn't matter anymore, when you're doing creative stuff, because you don't even have to write, I think the windows are like the art class of school, I never felt I was doing work dressing the windows, it feels like work the rest of it, where the windows the practical stuff doesn't feel like you're working, that's what I want to be, that's why I need this."

In the words of theorist and major educational reformer for the 20th century John Dewey,

"To find out what one is fitted to do, and to secure an opportunity to do it, is the key to happiness" (Dewey, 1916, p. 262).

I'm blessed with a career of over twenty years working in what I love, all aspects of VM&D. Currently, I am delighted to have the opportunity to lecture in my specialised field on the BA Visual Merchandising and Display course in the Dublin Institute of Technology. Indeed, like Fay when doing window display and VM, I never feel like I am working. I am passionate about nurturing new talent and motivating the future visual merchandising designers. My aim is to teach the students the best way I can, building on my experiences with their experiences. All the participants experienced failure and success, there lies the motivation and drive for their future. I have no doubt their intuition will lead them to find what they are fitted to do and indeed experience a job that gives them great reward.

In the next chapter I will use recommendations from the participants interviewed to conclude this research.

CHAPTER FIVE

Recommendations and Conclusion

Introduction

There was limited research from an art and design perspective on inclusive best practice on dyslexia in particular from a visual merchandising perspective. This exploratory case study research proved a valuable insight to me as a researcher but also as a teacher. I drew on literature, national policy, DIT policy and crucially the voice of five dyslexic students studying on the VM&D programme at DIT. This research was made possible by exploring the views and perspectives of the participants who contributed significantly to advancing my knowledge on dyslexia from a VM&D viewpoint. I was humbled and grateful to the participants for sharing their personal, and sometimes distressing experiences with me. I therefore believe it is only fitting to use some of their recommendations to conclude this research.

My first and second research questions overlapped throughout this research study, the academic impacts indeed caused the majority of emotional effects. What are the academic impacts of dyslexia? What are the emotional effects of dyslexia? My third research question asks; What strategies can the students see as ways to help/ improve their learning experience on the programme? In response, the participants certainly make some fantastic recommendations, I will set out some of these below. I will then conclude this research with questions raised by some significant findings.

From this exploratory case study, it became apparent that literacy and technology had massive implications for learning among the participants. The participants struggled with learning new material. Some felt by the time they read the information they had forgotten it. The participants' organisation skills featured during the interviews. Dyslexic students may get bogged down, overwhelmed and stressed by the workload in college. Snowling (2006) states that dyslexic short-term memory affects them remembering verbal items, despite some having a high IQ. In contrast, their visual memory is in sync with the majority.

Literacy: As discussed in the findings chapter the students' handbook and assignment briefs proved difficult. The students came up with some worthwhile recommendations such as using a simpler visual format, perhaps adding a footnote with a visual representation. Reid (2009) states that teachers should use creative teaching strategies and involve students in the process.

I would encourage all teachers designing projects for creative cohorts to adopt a more multimedia/ multi-sensory format. Fay suggested: "less frills" when producing assignments. Pia emphasised the need for more accessible reading material, she commented: "*simpler, clearer versions for everyone because everyone asks questions not just dyslexic students.*"

There was a suggestion to do separate briefs for dyslexia. I somewhat disagree. The format of papers should be inclusive for all. There are simple strategies that will make documents accessible. Unambiguous format, using readable text, bullet points, visual representation or perhaps an example image, at the very least documents should be produced in a dyslexic friendly font (san serif/ Arial/ comic sans etc.) on high-quality colour paper. This supports an equitable environment with inclusive practices (DAI, 2017). The participants noted that the oral representation of assessment briefs by tutors was paramount. The participants must be present when projects are delivered. If they missed delivery they would not understand, and could spend days sometimes weeks trying to understand the content.

The realistic needs of dyslexic students need to be highlighted and accommodated early on in Higher Education. Dyslexic students must self-determine their study journey. They no longer have the added security of a scriber or a secluded room with added time and provisions. Some of the students argued both were provided in school and should be continued. Karla commented "*I did have a reader for my whole leaving cert I find it really confusing what a question is asking me now.*" Reasonable adjustments take into account particular situations and what is in fact deemed reasonable and not conclusive (Brunswick, 2012).

Sometimes the participants confused the meanings of words. Brunswick (2012) argues that students are often requested to highlight pertinent key words, this method is ineffective if the students do not understand what the words are or mean (See Ally, chapter 4, p.37). Karla remarked: "*maybe if you had the words beforehand you could learn the words.*" The participants are all visual learners, perhaps a glossary of VM language, with picture association of the terms. For example, Point of Sale (POS), a picture of POS concerning VM, then a demonstration why, what and when it is required. Subsequently get the students to action incorporating POS into their display? "Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results" (Dewey, 2010, p. 50).

Technology: Reid & Elbeheri (2009), state that it is important to note people with dyslexia should not be considered a homogenous group, not all dyslexics have the

same profile. My findings indeed supported this argument, the participants certainly all adopted different strategies to aid their learning. The literature recommends embedding technology to enhance learning, one of my findings ironically disputes this fact. From my interpretation, for the dyslexic students on the VM&D programme, it caused the most anxiety and frustration. Interviews with the participants revealed a common difficulty with technology. This barrier can in fact hinder recommendations from DSS and dyslexia bodies, that technology-enhanced learning has the potential to meet many of the support needs of dyslexic learners (DAI, 2016; Griffin & Shelvin, 2008; JISC, 2015).

Several participants were at a huge disadvantage because they did not have a personal laptop or iPad when they started college. The option of borrowing one or using on campus options added to an already difficult time. One student could not afford her device until the third year, this had an effect on her learning. This needs highlighting in the student handbook as a fundamental tool before the student starts on the VM&D programme. Because of this some of the participants were unable to avail of the assistive technologies recommended by the LSO. The fallout from this was accumulated stress, anxiety and low self-worth. Tutors, DSS and LSO expect that everyone today is tech savvy. In fact, the idea of downloading assistive programmes caused high stress from self-confessed technophobia. The Assistive Technology Support Officer may be wasting their time offering various supports to suit individual needs, if the participants do not understand technology. The idea of colour coding emails, the CAO model and the library to highlight different departments could make life so much easier for all students and staff. Audio correspondence would also help the participants because sometimes vital information was missed via text.

Ideally, we should be providing a teaching environment that encourages dyslexic students to learn how to learn. Perhaps this is easier said than done, a lack of awareness among tutors can create inaccessible learning and teaching practices. Gardiner (1983), encourages giving different learning styles and various type of intelligence an opportunity by offering different formats. This, in theory, is adopting the Universal Design for Learning (UDL) which advocates equality and includes all students (Glass, Meyer & Rose, 2013). Pia spoke of receiving "*a handout and a big book with a load of writing about CAD*". My interpretation was that this action left the students feeling perplexed and unsupported. A more constructive active discussion, clarification and direction could help the students overcome barriers they face learning about technology (Reid & Elbeheri, 2009). There is an assumption students are already compatible in technology, however my findings debate this. Providing a zone of

proximal development on learning CAD, where the teacher scaffolds knowledge about what is known and building on this knowledge will develop positive self-esteem and build confidence (Jordon et al. 2008; Vygotsky, 1978) (see chapter two Figure 1). I will set out Fay's excellent recommendation below:

> *"The symbols are easy to remember in CAD, but it's hard to remember what words they use, it's like another language, maybe if they gave us a glossary beforehand with the symbols matching the words, we could learn them and know what they're saying."*

I think as a strategy this can be adopted, I intend to action this method going forward. Brunswick (2012) & Reid (2009) argue that a valuable perspective on education often overlooked as a resource; is the voice of the student. Riddick, as cited by Brunswick (2012), argues that,

> "What the ultimate purpose of gaining students' perspectives might be…Is it to empower students and give them a stronger sense of agency in their own learning, or is it really about improving their general well-being and school experience?"

Socially we need to promote an inclusive education for the good of all. Change can be small, but it can result in a move towards educational equality. I was somewhat apprehensive about the student's ignominy and their assumptions regarding how people might view their capabilities. The participants often referred to their non-dyslexic peers as *normal*. From a creative design perspective, we need to celebrate uniqueness, and nurture thinking outside of the box. Reid (2009) states that:

> "Creativity and the 'gifted' dyslexic student have: superior listening skills, expansive vocabulary, excellent general knowledge, good abstract reasoning skills, unusual capacity for processing information, good problem-solving skills, can be creative, original thinkers, may be artistically/musically talented" (Reid, 2009, p. 221).

All the participants wanted tutors to know they had dyslexia. However, for some the process was hindered due to which route they entered college (DARE, ACCESS or the regular route). The participants stressed tutors should encourage early disclosure from dyslexic students, tutors should inform students of the supports available. Some of the participants suggested resending a refresher email to remind tutors about the dyslexic students in class, more importantly sending the information to new tutors joining the programme. Participants discussed the lack of awareness some tutors

have. It centred on communication between DSS, tutors and new part time staff. Participants discussed that some tutors were unaware of students' having a disability. This lead to students having to explain and defend themselves. Ally had a very stressful time having to explain her dyslexia: "*that's my disability I cannot help it, I had to say it because I was getting a grilling for not spelling something right, and it was in front of the whole class.*" Under law HEIs are required to treat students with a disability equal to their class peers (Justice, 2015). Pia also commented on awareness from all staff:

> *"New lecturers that come in that wouldn't have as much to do with DIT, I find that difficult whether they know about us or not, it would be nice if they knew... If it was flagged to new lecturers, maybe the email sent and cc'd again each semester."*

Questions raised

I was not expecting to experience the levels of emotions the participants experienced. Their resilience and drive needs to be recognised. In my opinion, this could be minimised by awareness and simple inclusive strategies, perhaps redirecting defining academic achievement as 'success'. Karla, Pia, Ally, Tia and Fay all experienced humiliation when corrected in public. I strongly disagree with correcting any student in front of an audience, there are respectful ways you can guide students leading on to building confidence. There still seems to be some stigma associated with the participants' ability to perform or what they understood. Pia discussed her peers' perception of her when they acknowledged she was dyslexic; "*I'm not dumb I understand, just sometimes I might ask a second question*" (See Pia, chapter 4, p.52).

Despite government and HE policy, fair practices in the class room are still not the normal practice. There are lots of reasons for this: assessment commitments, over stretched timetables and lack of knowledge/training for some academic staff. Before dyslexic students enrol, they need to sign up to the Disability Support Service to avail of supports on offer. The online system is indeed colour coded, but as mentioned before the participants were not comfortable with technology. One participant preferred "*to go down in person*" rather than go through the online steps. Another important note, the online steps are not in accessible format, at the very least they should offer a screen reader or text to speech utility which are simple adaptations to any application.

Students' lack of organisation emerged several times; perhaps this is why they do not utilise the supports on offer. Are we reaching them, have they missed some vital information or strategy through text in the midst of transition into college? Are the DSS so over stretched they are missing out on reaching the students who need the supports? The participants spoke of the three-day event with the DSS held at the start of term. Most of the participants had forgotten or lost the vital information given. I would recommend workshops delivered either before term starts (during the summer) or an over view at the onset of term discussing supports, then a future workshop when things have settled to capitalise on the information/supports offered.

Another question raised, was the necessity of being reassessed in order to qualify for supports that the participants could not avail of. We need to be aware at DIT of the unexpected expense of getting reassessed. The excessive cost of five hundred euro can add extra stress for the students and their parents. Another point, is the notion of having to reapply each year to the DSS for supports they don't use or found "*too much hassle*." It must be highlighted that this is extra stress and work for the students' and indeed the already over stretched DSS.

I would encourage more community of practice among the dyslexic students and tutors. Sharing various strategies and developing a peer support network with a common goal in relation to VM and dyslexia will aid all involved. The interaction with peers, discussion, understanding and recall can in fact enhance learning. Another industry practice is learning from experience and experienced people sharing their knowledge. Why not invite past dyslexic alumni to share their experiences. Another suggestion from one of the participants, was to set up a meeting with dyslexic students from first, second and third year to share their experiences learning on the programme. I believe the DSS are missing an opportunity to lighten some of the load and possibly acquiring new strategies from the dyslexic students' perspective.

In order to provide individual flexible approaches for learning, teachers/staff need to get to know the dyslexic students individually (Reid, 2009; JISC, 2017). Assistive technology support officers, highlight various supports that are available. The reality is again the lack of resources from the DSS point of view. They do not have the capacity to get to know and understand the dyslexic students' individual needs. There is one staff member to every one hundred and twenty-two students with a disability, and this number is multiplying, how are the DSS expected to cope? Dyslexia has been acknowledged and researched for decades, but there is still no definite answer on a universal remedy.

"Training for all staff should include more than just disability awareness, inclusive practice is good practice" (JISC, 2017, p.1). It reduces barriers for learners with a disability but also provides positive benefits for all other learners. In my opinion, the recommendations the participants suggest are acceptable and practical. All of the above should be mandatory instructional practices for tutors teaching students with dyslexia. The student's recommendations are somewhat comparable to the UDL strategy. The UDL model encourages higher education to implement and leverage the flexibility of digital technology and offer options for the diverse learner need. The UDL framework gives all individuals equal opportunities to learn and educator's new ways to teach. I hope to bring back some topics for discussion to my colleagues in The Creative Arts Department in DIT.

Western education measures students learning through written word. This fundamentally highlights dyslexic student's weaknesses and fails to see their strengths. Dyslexic students are resilient and determined, they have to work much harder at everything. Imagine if there were no barriers, what would the dyslexic students achieve with their unique and often innovative ability to think outside the box? I believe mastery in anything they put their mind to. Our programme promotes creativity and design, perhaps we need to set our creative identity by creating assignment and assessment that includes our students equally. The participants' struggles and triumphs could translate into learning strategies that would enable an equal/inclusive learning for all. I believe that those who learn at a slower pace embed their knowledge and learning experience thoroughly. The dyslexic students want to perfect everything they do, is this a designer strength or a dyslexic strength? What is certain is that mediocrity is not in their constitution. "When work and education environments let go of their narrow reliance on linear values and embrace creative diversity, the entire population benefits "(Brunswick, 2012, p. 205).

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Appendices

Appendix 1: 7 Principles of The Universal Design for Learning

Principle 1: **Equitable use**	**The design is useful and marketable to diverse abilities.** **Guidelines:** 1a. Provide same means of use for all users/ identical whenever possible; equivalent when not. 1b. Avoid segregation or stigmatizing any users. 1c. Provisions for privacy, security, and safety should be equally available to all users. 1d. Make the design appealing to all users.
Principle 2: **Flexibility in use**	**The design accommodates a broad range of individual preferences and abilities** **Guidelines:** 2a. Provide choice in method of use. 2b. Provide right- or -left handed access to use. 2c. Facilitate the user's accuracy and precision. 2d. Provide adaptability to the user's pace.
Principle 3: **Simple and intuitive use**	**Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills or concentration level.** **Guidelines:**

	3a. Eliminate unnecessary complexity 3b. Be consistent with user expectation and intuition. 3c. Accommodate a broad range of literacy and language skills. 3d. Arrange information consistent with its importance. 3e. Provide effective prompting and feedback during and after task completion.
Principle 4: **Perceptible information**	**The design communicates necessary communication effective to the user, regardless of ambient conditions or the user's sensory abilities.** **Guidelines:** 4a. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information. 4b. Provide adequate contrast between essential information and its surroundings. 4c. Maximise 'legibility' of essential information. 4d. Differentiate elements in ways that can be described (i.e., Make it easy to give instruction or direction) 4c. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.
Principle 5:	**The design minimises hazards and the adverse consequences of accidental or unintentional**

Tolerance for error	**actions.**
	Guidelines:
	5a. Arrange elements to minimise hazards and errors; most used elements, most accessible; hazardous elements eliminated, isolated or shielded.
	5b. Provide warnings of hazards or errors.
	5c. Provide fail safe features
	5d. Discover unconscious action in tasks that require vigilance.
Principle 6: **Low physical effort**	**The design can be used efficiently and comfortably with a minimum of fatigue.**
	Guidelines:
	6a. Allow the user to maintain a neutral body position.
	6b. Use reasonable operating forces.
	6c. Minimise repetitive actions.
	6d. Reduce sustained physical effort.
Principle 7: **Size and space for approach and use**	**Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture or mobility.**
	Guidelines:

	7a. Provide a clear line of sight to important elements for any seated or standing user. 7b. Make reach to all components comfortable for any seated or standing user. 7c. Accommodate variations in hand grip size. 7d. Provide adequate space for the use of assistive devices or personal assistance.

Appendix 2: Information sheet

Information sheet

A research project, investigating how the visual merchandising and display programme in the Creative Arts Department at the Dublin Institute of Technology can embed best practice for lecturers teaching students with dyslexia.

Introduction

I would like to invite you to participate in this project which is concerned with students learning with dyslexia on the visual merchandising and display programme. I hope to interview year one and year three students who have dyslexia.

Why am I doing the project?

The project is part of my final year of the MA in Higher Education Teaching and Learning programme, I also teach on the visual merchandising and display degree programme. In my short time teaching (3 years), I have encountered more than 12 students learning with dyslexia. I hope that this project could provide useful information for me and other educators working in design and art disciplines as well as staff directly supporting undergraduate students with learning disabilities which hopefully will empower dyslexic students in their learning.

This research will focus on what can be done to support the rising number of students learning with dyslexia. I hope to create awareness for dyslexia and advance my teaching to include all students.

Title

"That's where dyslexia doesn't matter anymore when you're doing creative stuff."
A Case study on the experiences of Learning with Dyslexia on the Visual Merchandising and Display Degree Programme: From the Voice of the Dyslexic Student.

What will you have to do if you agree to take part?

- I will provide 2 copies of consent form, if you can sign them and give me one and you keep one for your records.
- We will arrange times and a place convenient to you.
- There will be an interview no more than an hour using audio equipment or telephone.

How much of your time will participation involve?

Interview no longer 1 hour

Will your participation in the project remain confidential?

- Your information will remain confidential
- Your responses to questions used for the purpose of this project only.
- Assurance that if you take part in the project, you will continue to be anonymous.

Participants are at liberty to withdraw at any time without prejudice or adverse consequences; non-participation will not affect an individual's rights.

What are the advantages of taking part?

Create awareness for dyslexic students, understanding the challenges and possibilities that dyslexia can bring individuals. I hope to provide useful information for other educators working in design and art disciplines as well as staff directly supporting undergraduate students with learning disabilities.

Do you have to take part in the study?

- No, your participation is entirely voluntary.

- You are not obliged to participate.

- Participants are at liberty to withdraw at any time without prejudice or adverse consequences; non-participation will not affect an individual's rights.

As a student studying on the visual merchandising and display programme studying with dyslexia, I hope (or "intending to") identify what support strategies work? And what support strategies are needed.

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What happens now?

If you are interested in taking part in this study, you can complete the attached consent form and email to me, if any help is needed with the response slip you can contact me (email/phone number?).

Once I've received the email of reply I will contact you to arrange a time that is convenient for you.

Appendix 3: Consent form

Researcher's Name: MICHELLE LALOR **Title: MS** **Faculty/School/Department: Visual Merchandising and display programme at the Creative Arts Department DIT Grange Gorman.**
The Title of Study: **"**That's where dyslexia doesn't matter anymore when you're doing creative stuff." A Case study on the experiences of Learning with Dyslexia on the Visual Merchandising and Display Degree Programme: From the Voice of the Dyslexic Student.
To be completed by the: subject/patient/volunteer/informant/interviewee/parent/guardian (delete as necessary) • Have you been fully informed/read the information sheet about this study? YES/NO • Have you had an opportunity to ask questions and discuss this study? • Have you received satisfactory answers to all your questions? • Have you received enough information about this study and any associated health and safety implications if applicable? YES/NO
• Do you understand that you are free to withdraw from this study? At any time without giving a reason for removing without affecting your future relationship with the Institute YES/NO • Do you agree to take part in this study the results of which are likely to be published? YES/NO • Have you been informed that this consent form shall be kept in confidence? Of the researcher? YES/NO
Signed_____ Date _____

Name   in   Block   Letters

_____

MICHELL.LALOR

_____

Signature of Researcher

_____ Date _____

Appendix 4: Module descriptor year 1.

BA Visual Merchandising and Display **Award Bachelor of Arts** **NQAI Level 7**
Brief description of modules YEAR 1: Semester 1 1. Theory of Visual Merchandising: 15 credits Module Description In this module students are introduced to the basic principles of visual merchandising. **Module Aim** The aim of the module is to develop the students' understanding of how visual merchandising is applied in stores, an awareness of brand image, and layout of store area, signage and ambience.
2. Strategies in Visual Merchandising: 15 credits **Module Description** In this module students are introduced to the basic principles of visual merchandising within a given store and the practical application of these principles. The module will create an awareness of image comparison between two high street stores in branding, styling and handling of presentation/visual merchandising. **Module Aim**

The aim of the module is to develop the students' understanding of how visual merchandising and display design are applied in stores and provide an awareness of brand image, layout of store area, signage and ambience. The students' will apply these principles in a range of projects.

3. AutoCAD: 15 credits continuing

Module Description

In this module students are introduced to the basics of the computer as a tool for communicating design. The module will introduce the student to the techniques of Computer aided drafting.

Module Aim

The aim of the module is to develop a basic skill in the creation of 2D and 3D drawing**.**

4. Business Studies: 15 credits continuing

Module Description

This module introduces the student to business and consumer law, the business environment, financial control and planning.

Module Aim

The aim of the module is to provide the learner with an understanding of the business environment, principles of law and financial control in the design environment

5. Critical theory: 5 credits continuing

Module Aim

The aim of this module is to study the history and theory of design.

6. Communications: 15 credits continuing

Module Description

This module introduces the student to the theory of communications, both oral and written. It introduces the student to the relevance of communication in the area of visual merchandising.

Module Aim

The aim of the module is

1. To provide the learner with an understanding of the relevance of communications in the retail industry.
2. To help students understand the role of presentations in business and the many kinds of presentations   business people make
3. To show students how to get control over all the information they want to present

YEAR 1 Semester 2

1. Homeware and Accessories 15 credits

Module Description

In this module students are introduced to the visual strategies used in visual merchandising and display of Homeware Departments and products of stores.

Module Aim

- To develop an awareness of symmetric and asymmetric balance
- To experiment with materials, texture and lighting.
- To develop student's ability to produce a promotional scheme

2. Theory of Visual Merchandising 25 credits

Module Description

In this module students are introduced to the basic principles of visual merchandising.

Module Aim

The aim of the module is to develop the students understanding of how visual merchandising is applied in stores, an awareness of brand image, layout of store area, signage and ambience.

3. Critical Theory As module information above

4. AutoCAD 1 As module information above

5. Communications 1 As module information above

6. Business Studies 1 As module information above

Total credits for the year: 60

Appendix 5: Module descriptor year 2

Fashion and Accessories: 15 credits

Module Description

1. **In this module students are introduced to fashion accessories**

Module Aim

- To introduce the students to the skills of handling accessory displays.
- The techniques of styling and coordinating fashion accessories.
- Attend work experience in a retail outlet.

2. Theory of Visual Merchandising: 35 credits

Module Description

In this module students are introduced to the basic principles of visual merchandising.

Module Aim

The aim of the module is to develop the students understanding of how visual merchandising is applied in stores including an awareness of brand image, layout of store area, signage and ambience.

3. AutoCAD: 25 credits continuing

Module Description

This module will further develop the skills of Computer aided drafting.

The student will be introduced to the concepts of solid geometric modeling.

Module Aim

This module will further develop the skills of computer aided drafting.

The student will be introduced to more advance solid modeling.

4. Business Studies: 25 credits continuing

Module Description

This module looks at financial control, marketing, intellectual property rights and health and safety in the workplace

Module Aim

To provide the learner with an understanding of necessary fundamentals of business in the visual merchandising environment

5. Critical Theory: 5 credits continuing

Module Aim

The aim of this module is to study the history and theory of modernism in design

6. Communications: 25 credits

Module Description

This module continues to diagnose weaknesses and develop each student written and oral communication skills.

It further links communication theory to the retail industry.

Module Aim

- To provide the learner with an understanding of necessary fundamentals of communication in the visual merchandising environment.
- To show students how to manage question and answer sessions
- To develop skill in explaining and selling ideas – being able to develop a concept and connect the facts and ideas involved so that others can understand and accept them

YEAR 2 Semester 2

1. **Fashion and Styling: 15 credits**

Module Description

In this module students are introduced to Fashion Styling, Soft dressing and Island Display.

Module Aim

- To enable the students to develop original approaches to the styling of all types of clothing
- Introduced to mannequin handling, positioning and grouping

2. Theory of Visual Merchandising: 45 credits

Module Description

In this module students are introduced to the basic principle of visual merchandising.

Module Aim

The aim of the module is to develop the students understanding of how visual merchandising is applied in stores, an awareness of brand image, layout of store area, signage and ambience.

- AutoCAD 2 As module information above
- Business Studies 2 As module information above

Critical Theory

Module Aim

To study the history and theory of fashion design.

Communications 2 As module information above

Total credits for the year: 60

Appendix 6: Module descriptor year 3

Year 3: Semester 1

1. Major Industry Project: 15 credits

Module Description: linked

In this module students are developing a major project in a specialized discipline with in the retail display and visual merchandising promotional industry, in cooperation with the students own work placement.

Module Aim

- The aim of the module is for the students to develop their own specialist disciplines, within retail display, visual merchandising, and promotional presentations.
- To give the students the experience and responsibility of working with a professional team and clients in the industry
- To develop the student's awareness and appreciation of how the principles of display operate in the retail or promotional industry.

2. Work Placement linked

Module Description

In semester 5 and 6 of the third year, students must complete a period structured work placement in an approved Retail environment.

Module Aim

The aim of this module is to enable the student to

- Observe in action business functions and business problems that may have been dealt with in the academic programme.
- Demonstrate personal qualities of commitment, flexibility and integrity.
- Experience teamwork and leadership
- Learn new business and personal skills
- Prepare and develop a proposal for a major retail promotion as part of their Major Project.

3. Interior Design: 5 credits

Module Description

This module introduces the student to the basic principles of the design for retail spaces.

Module Aim

To introduce the student to the basic design requirements for retail spaces

- To provide the student with the opportunity to convert an existing building to a retail environment
- To provide an introduction to building regulations appropriate to retail spaces

- Digital Modeling

Module Description

In this Module, the student will enhance and develop their modelling skills through projects and achieve the ability to derive orthographic information (plans, sections & elevations) from the model**.**

Module Aim

This module will further develop the skills of computer aided drafting and digital modelling proficiency and produce complex 3D objects and spaces for visual analysis.

Business Studies 3: 5 credits

Module Description

- Retail Marketing
- Consumer Behavior
- Taxation
- Employment Law

Module Aim

The aim of this module is to provide the learner with an understanding of retail marketing, consumer behavior, basic taxation and employment laws

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Branding & Visual Merchandising: 5 credits

Module Description

This module will introduce students to the basic elements of branding.

It will examine brand names, logos, positioning brand associations and brand personality in the context of the Retail Industry.

Module Aim

The aim of the module is informed students of the role and importance of branding in the process of visual merchandising and show them how branding operates in the context of the international retail industry.

Total credits for the year: 60

Appendix 7: Interview questions

Accessing college

- What made you decide to study VM&D?
- How did you learn about the VM &D programme?
- From your experience how was the application procedure for you?
- From your experience was the CAO form easy to understand and fill out?
- Did you need help with the application? If yes how was the experience?
- From your perspective were there any difficulties and challenges with getting into college?
- Did you apply to any other collages? From your perspective were any other collages easier to apply?
- From your experience how was your transition onto the vm programme?
- Do you have any recommendations how the transition period could be easier for dyslexic students?
- Do you know of other dyslexic students? How did you learn of other dyslexic students?
- From your perspective Is there good peer support among dyslexic students?

DIT Disability Support Service DSS

- Were you aware of the DIT Disability Support Service online before you enrolled
- From your perspective was it clear and user-friendly
- Did you sign up to the Disability Support service (DSS) early on in your college career
- Did you get an appointment at the start of the first semester to meet your LSO
- How was your experience with the DSS/LSO?
- How was the whole enrolling process with the DSS/LSO?
- From your perspective are the various technologies recommended by the ATO useful to your learning
- What technologies do you access the most and why?

Services and information

- What services and supports are offered to students on the VM&D programme learning with dyslexia?
- From your experience are the learning supports offered helpful to you in your study situation
- From your experience is information made reasonably available in clear formats
- Do you receive up to date regular information on learning supports and learning strategies?

Teaching/environment:

- Have you read the Student Handbook 2015-2016 BA Visual Merchandising & Display DT598?
- Is the layout clear and easy to follow from your perspective?
- From your experience are the module descriptor/ module aims and learning outcomes in the handbook clear and understandable?

If not: in your experience do you have any recommendations that could help?

- From your experience how do you find the various briefs for your projects?
- Do you reference the General assessment criteria grid in the handbook?
- Is the curriculum delivered in a way that is clear/understandable to you? If no any recommendations?
- From your experience are assignments made reasonably clear
- From your point of view is there a level of awareness on dyslexia from class lectures.
- What is the students attitude towards dyslexia from your experience?
- What is the lecturers attitude towards dyslexia from your experience?
- In your experience how is your learning environment regarding learning with dyslexia?
- From your experience are there any obstacles/barriers in the way of your learning
- From your experience is the vm programme inclusive for all students
- From your perspective has the VM&D lecturers and supports available provided reassurance, support and encouragement
- From your view how could teaching staff facilitate the learning needs of the student with dyslexia?
- What, if any, are your frustrations or challenges learning on the programme? Can you give me an example?
- From your perspective did lessons become easier over time?
- How do you take notes or study for an assignment or exam?
- How do you find the continuous assessment exam?
- From your perspective are learning outcomes clear and assessment clear??
- From your perspective how do you find the review (tutorial) of your performance at the end of the semester?
- Do you consider the formative feedback useful to progress you further in your assignments and future work?

Final questions

- If you had to identify your biggest challenges on the programme in relation to learning with dyslexia what would they be?
- Do you have any recommendations for the programme and future students learning with dyslexia on the VM &D or other art programmes?
- Can you describe one of your more rewarding learning experiences on the programme? Why do you think that was?

- What strategies do you have that could be useful?
- Do you have any recommendations?
- Have you any other comments?

Appendix 8: Phases of Thematic analysis Braun & Clarke (2006 p. 35)

Phase	Description of the process
1. Familiarising yourself with your data	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic "map "of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Appendix 9: The disability information and guideline for lecturers & staff on dyslexia.

What can Lecturing Staff do to support these students?
Use a wide range of teaching methods/materials to increase accessibility for all students
Provide an overview when introducing a new topic, so students know what to expect – highlight the main argument and the key points.
Provide a summary at the end of the lecture/topic.
All lecture/tutorial/lab notes/slides/handouts should ideally be available in an electronic format in advance of the lecture. This will decrease the amount of writing a student has to do during the lecture and will allow the student to scan the text when using literacy support software.
Provide reading lists in advance to facilitate early reading and planning. Indicate the most important books on a reading list.
Introduce new topics and concepts obviously – clarify new language.
Assignment topics should be provided early, and students may require extra time to complete assignments.
Keep oral instructions concise.
Rephrase and repeat information.
Be sensitive to possible self-consciousness by the student about speaking or reading aloud in lectures and tutorials.
DIT, (2017) http://dit.ie/disability/informationforstafflecturers/#Dyslexia

Appendix 10: 7 Targets, DIT's current strategy for widening participation

Theme	Objective
Communication & Partnership	Enhance internal and external widening participation communication and collaboration
Student Experience	Provide a high-quality student experience in DIT to ensure that students of all backgrounds are supported in developing their learning to their highest achievable level, while also fulfilling their personal potential
Clear Pathways	Expand current and provide new access, transfer and progression routes to increase the number of students in higher education and DIT from under–represented groups
Community Outreach	Root DIT in the relevant communities in order to develop current and additional bridges to higher education for students and communities
Mainstreamed	Contribute to a research-base for widening participation that contributes to the development of practice
Evidence Based	Contribute to a research-base for widening participation that contributes to the development of practice
Reflective	Develop the basis for real world learning which informs research and our research agenda.