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NATIONAL ASSOCIATION OF DISABILITY PRACTITIONERS

Editorial guidelines

JIPFHE has a refereed section which includes peer reviewed papers, and a practitioner focussed general section. Papers for all parts of JIPFHE share the common aim of furthering best practice to promote disability equality in post compulsory education (focussing on the whole student journey and transitions into FE and HE, and out, possibly to work; and the experiences of disabled staff). The main audience for JIPFHE is staff who work with disabled people in FE and HE and the journal should be of practical use to this constituency as well as enabling readers to gain a deeper theoretical underpinning in critical disability studies upon which to develop their day to day professional work.

Based on the principle of "nothing about us without us" contributions directly from disabled students and staff are encouraged. Articles should be between 2500 and 6500 words, usually around 3,500 to 4,500. You may be asked to reduce the number of words even if your article is less than 6500, if the referees feel that you could express yourself more succinctly. An abstract of no more than 300 words is required for research based articles (not for reflective pieces about personal experiences-which will mainly be from disabled /neurodiverse people).

Contributions from disabled /neurodiverse people about their own experiences of post 14 education and training (in its broadest sense) are very welcome.

Harvard referencing is required and at least 50% of your references need to be no more than three years old.

Contributions should reflect ethical participatory /emancipatory research, which involves disabled /neurodiverse participants and results in interventions which improve services for disabled /neurodiverse people in the post 14 (education and training) sector.

Ethical guidelines prescribe that research participants should not be identifiable, and confidentiality must be respected.

A clear ethics statement is required with any research data.

Language reflecting the social model of disability is expected.

Articles must be original and should not be being considered by another journal when they are presented.

Papers should be submitted to the NADP Admin Office admin@nadp-uk.org who will forward your paper to the editor. Two referees, nominated by the editor, will review the paper anonymously and return their comments to the editor who will either then contact the author about the outcome or liaise first with the editorial board if there is not sufficient agreement between the reviewers. The outcome will be that the paper is deemed appropriate (usually subject to modifications) or unsuitable for JIPFHE. Refereeing takes time because of the liaison involved so please be patient. You will be given a reasonable timescale to make amendments.

Editor, vol 7

John Conway

Editorial guidelines.....	2
Brunner, D. Universal Design for Learning: Academic Access for Diverse Learners	4
Clarkson, M, Esendal T & Herbert L. Transition to Employment: a supported standardised approach.....	9
Kroeger, S & Muller, C Thinking and Practicing Differently, How Disability Studies Can Inform Service Delivery.....	20
Robson, L, PAtel, M & Nicholson, J National Association of Disabled Staff Networks (NADSN) – “Experiences from our Disabled Staff Networks across the UK”	28
Kramer, S. Is there a link between perceptual talent and dyslexia?	34
Sims, T, Milton, G, Martin, N & Dawkins, G. Developing a user-informed training package for a mentoring programme for people on the autism spectrum	49
Vincent, J. Transition from secondary to higher education: an evaluation of a pre-entry transition programme for students on the autistic spectrum.....	53
Sims, T. Transition to University for Young Adults on the Autism Spectrum	64
Martyn, K & Gibberd, D Workshopping transformation: Introducing the concepts of UDL into a BSc Nursing course.	70
Cannon, H. Examining the need for, and establishing the efficacy of, the language modification of exam papers for university students on the autism spectrum	75
Newman, I & Conway, J The Nature of Inclusive Learning Environments (ILEs).....	100

Universal Design for Learning: Academic Access for Diverse Learners

Daryl Bruner
Director of Academic AccessAbility
Greensboro College NC 27401
daryl.bruner@greensboro.edu

In the United States, as elsewhere, college students with learning differences represent a growing segment of our student populations. Universal Design for Learning offers a framework for a new paradigm in the way we 'do' higher education. This paper walks us through the history and framework of Universal Design for Learning, touches on advances in educational and neuroscience that dispel the myth of average, takes a snapshot of today's college student and walks through examples of the application of the Universal Design for Learning framework in the post-secondary setting. The information presented here is a result of a year-long study undertaken by the Office of Academic AccessAbility at Greensboro College that formed one of three pillars of the institutions Strategic Plan adopted by the Board of trustees in August of 2014.

Universal Design for Learning (UDL) actually has roots in the field of architecture. The concept of Universal Design was the vision of Ron Mace, a professor of architecture at North Carolina State University in the late 1950's through the early 1970's. Mace was confined to a wheelchair due to polio, and sought to design products and buildings "to be used to the greatest extent possible by the largest number of people possible" (Center for Universal Design, 2008). It is through his work that we now enjoy automatic doors in places like grocery stores, hotels, and airports; curb cuts that allow easy access to sidewalks for wheelchairs, strollers, and bikes; and have ramps to entrances, and zero entry showers and pools. Similarly, Universal Design for Learning seeks to provide an academically accessible environment that is usable by all learners to the greatest extent possible without the need for individual accommodations.

In the United States public education system, students begin their educational journey at around age 5. They enter a learning environment filled with color, artifacts they can interact with, and a wide variety of tools they can use to express themselves. The whole environment is designed to encourage discovery and creativity, and allows the students to interact with these new discoveries in ways that come naturally to them. However, as students' progress through the public education system, all of these wonderful and exciting ways of knowing and expressing are slowly taken away, and by the time students reach middle school, usually around age 12, the learning environment has shifted to one that demands conformity and order.

In his 2013 Ted X talk, The Myth of Average, L. Tom Rose, professor of educational neuroscience, relates the story from the United States Air Force. In the early 1950's, the Air Force had good pilots, better planes, but worse results. What ensued was a round of the blame game—the jet manufacturers were blamed the pilots and the flight instructors, while the Air Force blamed the manufacturers. Of course finger pointing didn't solve the problem, so they began to work together and discovered that the problem was with the cockpit design and layout, but there was a simple solution. In the initial design phase, the manufacturers used measurements of 4,000 pilots over ten physical traits: height, shoulders, chest, waist, hips, legs, reach, torso, neck, and thigh. The data was used to design the cockpit for the average pilot. On the surface it seems like a good idea. The problem was no one hit the average on all ten measurements. In fact, every pilot had a jagged profile across the ten measurements. What they discovered was they had actually designed a cockpit to fit

nobody. The solution: make the seat adjustable. Not only did that solve the problem, but it also expanded opportunities for others to become pilots.

As Sir Ken Robinson points out that the shift from allowing students such creativity in their discovery of the world around them to a more machine-like, mass production educational system, can be traced to the industrial revolution. He contends that the production-line like education was designed to produce a single product—preparing students for college (2006). Core curriculums, standardized test, and autocratic delivery systems all seem to support his argument.

Advances in technology over the last 20 years have led to huge advances in both neurological and learning sciences. Research has shown that the brain is made up of hundreds of thousands of neurological networks—each formed in response to the need for completing a task (Smith, 2003). For example, when given the command to 'cross your arms', we complete the task in almost a reflex like manner. Our brains process the command, then through a series of neurological connections, the brain choreographs all the movements required to cross our arms. These neurological connections form a network designed to complete the task of crossing one's arms—it becomes 'hardwired' in the individual's brain. Further, these networks are uniquely sequenced in each individual in the same manner as the uniqueness of our fingerprint. When asked to cross our arms the other way, there is processing delay as the task requires a different set of neurological connections to be made before the task can be completed.

When applied to the science of learning, these findings lend support to our understanding of how individuals learn. Just as the pilots jagged physical profiles affected individual performance in an aircraft designed with a stationary seat in the cockpit, with learning, an environment designed to meet the needs of the 'average' learner, fails to allow for learning variances and a jagged learning profile (CAST, 2014). For instance, a learner may be a very eloquent speaker, with a tremendous vocabulary, yet consistently does poorly on written assignments. In this case, the learner will be at an academic disadvantage due to dyslexia in a course that is writing intensive. With this in mind, the Universal Design for Learning framework embraces the variances in the individuals learning profile as yet another layer of depth the diversity of who we are as being human. The shift then is from an individual with a learning disability, to an environment that is disabling to diverse learners. Based on the work of Russian Psychologist Lev Vygotsky, and less directly, American Benjamin Bloom, the Universal Design for Learning framework has three guiding principles: Flexibility in Representation, the way knowledge and information is shared; Flexibility in Expression, the ways in which assessment of learning is measured; and Flexibility in Engagement, ways that learners interact with the knowledge and information that sustains interest and persistence Meyer, 2014). Dr. Leonard Sweet, former Vice President of Academic Affairs at Drew University, describes today's college students as EPIC-- Experiential, Participatory, Image-driven, and Connected. Application of the Universal Design for Learning framework makes a great match for educating today's college students (Elmore, 2013). It is worth noting that in the United States, the Universal Design for Learning framework is increasingly being incorporated in our public education system, and as these students begin to consider college, their families are looking for similar educational environments for their students.

Traditionally, our higher education system uses the lecture-exam framework for imparting knowledge and assessing a students' understanding of the material covered. While agreeing that professors are experts in their content area, it is equally important to acknowledge that most Ph.D. programs do not incorporate any pedagogy coursework to prepare future faculty members on how to teach. As a framework, Universal Design for Learning provides three simple principles to aid faculty in their course planning: Flexibility in

Representation; Flexibility in Expression; and Flexibility in Engagement. The goal of the UDL framework is to create learning environments that are useable by all students with minimal need for individual accommodations.

Universal Design for Learning is a framework, not a protocol, meaning that traditional lecture and exam modalities will remain a part of the framework. The difference in design when applying the principles of UDL to a course is that lecture and exams are but one way the material is conveyed. A course can be planned to include an exam, a paper, a presentation, and a project—all weighted equally, as means by which students can demonstrate what they have learned. By incorporating these various assessment methods into a course, more students have a better opportunity to demonstrate what they have learned in ways that best suit their learning profile. For example, a dyslexic student may struggle taking a traditional written exam or writing a paper, but because of their dyslexia, the student may have developed excellent oral presentation skills, or possess the ability create a remarkable projects, that can be used to assess their grasp of the material being covered. By designing learning environments that allow students to work to their strengths, we provide greater opportunities for all learners to develop competence, confidence and independence.

The first UDL principle is Flexibility in Representation. As mentioned earlier, the prevailing method in post-secondary education is lecture. This principle encourages faculty members to expand the ways by which they communicate the information students are expected to learn-- and many faculty already do so intuitively. In addition to lectures, the inclusion of videos, blogs, readings, and discussion are all vehicles for disseminating information. In an interesting study at Harvard University, the professors of a team taught course offered students a choice of two textbooks for the course, a brilliant application of Flexibility in Representation at work (Rose, 2006). Take for example a college level introduction to general biology course. There are hundreds of possible textbooks from which to choose, each covering the same basic information, but organized differently. Recalling the jagged learning profile that is as unique as our fingerprints, faculty members are most likely to choose a textbook that best aligns with their individual preferences. That does not make the other textbooks wrong. In the Harvard course, students were able to select the textbook that best aligns with their learning profile. With a little advance planning—making sure the students are directed to the correct chapters in their respective textbook choices for the material being covered, etc.—faculty were able to build-in another layer of Flexibility in Representation.

Flexibility in Expression is the second principle of the Universal Design for Learning framework. This principle is focused on assessment of a student's understanding for the material being taught. Again, the traditional form of assessment, exams, remains an option, but this UDL principle encourages faculty to expand ways in which a student's learning and comprehension are assessed. Inclusion of a variety assessment method such as projects, papers, and presentations, are all excellent examples of the application of this principle. By building in multiple assessment methods all equally weighted, faculty members create a learning environment that allow students to demonstrate their understanding of the material covered in a manner that more closely aligns with their unique learning profile. Using music as an example, faculty at the department level can determine what core competencies students need to demonstrate before advancing to the next level. Based on those agreed upon competencies, a faculty member teaching an entry level course in Music Theory can develop a competency check-list that assess a student's progress on a daily basis, rather than only at certain set intervals (mid-term and final). This provides valuable, constant feedback to the students to help them plan their studying strategies.

The final principle, Flexibility in Engagement, seeks to connect students' learning to their lives. In the traditional format of lecture-exam, a student often sees their role as passive. Indeed, as pointed out earlier, the traditional public education system in the United States is designed to prepare students to take end of the grade tests, rather than about learning. Applying this principle means creating a learning environment that allows students and faculty to actively interact with the material in ways that lead to discovery, inquiry, and experimentation; this in turn helps students build confidence, competency, and independence. The goal here is to help students develop a sense of ownership and responsibility for their learning. Providing multiple means of engagement with the material can easily be incorporated by encouraging participation in discussions—both in the classroom and through online forums or blogs. Offering choices to students, such as with the textbook, or how the means by which a student can demonstrate what they have learned—such as a choice between writing a paper and making an oral presentation. Poet William Butler Yeats once said, “Education is not the filling of a pail, but the lighting of a fire.” In this presentation, the application of Universal Design for Learning in the post-secondary education setting provides one avenue for lighting that fire for our students. Based on the premise that what works for students with learning differences benefits all learners, UDL provides a framework that encourages flexibility in representation, expression, and engagement. Thanks to advances in learning and neuroscience, we have a better understanding of just how unique the learning process is for each individual. By incorporating the UDL framework, we design an educational environment that embraces our diversity as learners and encourages us to work to our strengths.

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Transition to Employment: a supported standardised approach

Mary Clarkson, Tugrul Esendal Leanne Herbert
De Montfort University, Faculty of Technology
The Gateway, Leicester

Abstract

A framework to help disabled and non-disabled students ease their transition to work is presented. The main objective of the framework is to raise awareness of various employment-related factors. This is so that the student can work to develop a suitable skills set, in order to maximise their employability, within their own personal requirements and preferences. The framework consists of an employability model and a software tool based on the model. The intention is for students to interact with the tool during their studies and be in a position to relate their academic and non-academic activities to their context of employability. The paper presents the thinking behind the framework, which is currently in a prototype form, and the possible way forward to the next version, based on feedback from a number of De Montfort University students and disability support officers, plus approximately 30 delegates at the NADP International Conference 2015. The positive nature of the feedback received so far has confirmed the need for such a framework in support of students. All interested academic and disability support staff are invited to contribute to the ongoing discussion and collaborate in the further development of the framework.

Background

The work described in this paper was carried out by the authors, as a research team, to find ways to help disabled students achieve success in their transition to employment. In this context, employment was taken to mean both industrial placement during studies and first job hunt following graduation. The team comprises one disability support professional and two academic members of staff, thus enabling the members to see both sides of the transition.

It quickly became apparent that some form of provision was needed that would illuminate and support the student's transition. An "employability framework" emerged, consisting of an employability model and a software tool based on the model. The objective of the framework would be to raise awareness of the multi-faceted nature of employability and the individual's need to take a holistic approach to self-development. The framework had three principles. The first was to make the software tool web-based, so that disabled students could use it at their own pace and in their own time, to explore their own employability. It would be available for use during the whole time the student was at university.

The second was to standardise this tool for all students, on the understanding that non-disabled students faced many of the same hurdles that disabled students did and, therefore, the same tool would be of benefit to them also, in exactly the same manner.

The third was to include support from tutors and disability officers as an integral part of the framework. This was done to maximise effectiveness, so that individuals could use the tool, with guidance, to suit their own specific needs and preferences.

Extensive research was undertaken, in the form of literature survey and field data collection, to develop the framework. Field data was collected from interviews and pilot studies involving both students and employers. The resulting framework is currently in a prototype form and is continuing to develop, with input from interested parties.

It was in this context that the framework was presented to a group of support professionals at NADP 2015 International Conference in Manchester, in June 2015. The presentation also included an online demonstration of the tool.

The aim of this paper is to bring the framework, together with feedback received so far, to the attention of a wider audience, in order to encourage further discussion and collaboration on its ongoing development.

Literature Survey

The team started its survey with the following thoughts:

1. The primary aim of most students coming into higher education (HE) is to gain employment in their chosen fields of study.
2. Each student needs to become “employable” to meet that aim, by developing a set of hard and soft skills during their studies, acquired directly and indirectly.
3. Universities can and must help their students to maximise their “employability”.

Employability is defined by the team as “the ability of the individual to operate effectively within their intended job market” (Clarkson and Esendal, 2012), the operative keywords being “effectively” and “intended job market”, although part-time or temporary work outside of their subject area may well constitute meaningful (and, therefore, intended) employment for some graduates.

Literature confirms the multi-faceted nature of employability. For example, Hillage and Pollard (1998) identify four facets: assets (skills and attitudes), deployment (career management and job search skills), presentation (e.g., CV writing), and context (personal circumstances and external labour market). Fugate et al (2004) suggest three facets: career identity, personal adaptability, and social and human capital. McQuaid and Lindsay (2005) also offer three facets: individual factors, personal circumstances, and external factors. Similar studies focus on the personal and social aspects of employability. For example, a study of under-employment amongst graduates highlights the importance of personal characteristics, besides academic achievement and job characteristics (Scurry and Blenkinsopp, 2011). Similarly, personality traits were found to influence career decisions and hence individuals’ career planning abilities (Gunkel et al 2010).

Personality traits and communication skills are acknowledged as important factors in any student’s employability profile. For example, adaptability is seen as a major requirement, certainly in general (Hillage and Pollard, 1998) but particularly for disabled people (McDermott et al, 1999).

Disability has been defined as “a physical or mental impairment which has a substantial and long-term adverse effect on your ability to carry out normal activities” (Disability Alliance, 2011; HM Government, 2010). This broad definition is used for legal purposes and hints at a diversity of impairments, without naming any specifically. Disability is also mentioned by Hillage and Pollard, as well as by McQuaid and Lindsay, as part of personal circumstances affecting employability.

Employment support is crucial for disabled people. Sayce (2011) defines disabled people as living with an impairment that has a long-term effect, but goes further in recognising that people are ‘disabled’ by barriers to participation, as much as by any actual physical or cognitive impairment. This social model of disability echoes an understanding of disability as a social construct, created as much by people’s perceptions and attitudes as by the sheer fact of a physical or cognitive difficulty (McMullin and Shuey, 2006).

The related observation that a difference model, in which disability is viewed as merely a way in which individuals are not the same as each other, is more helpful than a deficit or medical model, in which disability is viewed as a way in which an individual is somehow less

than other people (Griffin and Pollack, 2009). Therefore, students with disabilities are not patients; they are potential colleagues (Styracula, 2003).

Confidence in their own abilities is important for all students seeking employment, but more so for students with disability (Cockburn, 2011). The team's thoughts are that disabled students should be encouraged to be confident and, at the same time, avoid from putting up barriers for themselves.

In terms of supporting disabled students in realising their academic potential, the variety of accommodations or adjustments to teaching methods are well-established (e.g., Griffin and Pollack, 2009; Clarkson and Esendal, 2012; Burrow et al, 2010; Institute of Physics, 2013; DMU, 2014). Examples include physical access adjustments such as ramps, lifts, and automatic doors. They enable anyone with mobility issues to get about on campus.

Cognitive differences are also accommodated. Examples are extra time allowed on time-constrained activities; information formatted in visual ways, such as mind maps; and, the use of recording devices during lectures and tutorials (Griffin and Pollack, 2009; Institute of Physics, 2013; Trailblazers, 2013; Ofiesh, 2007 and 2015). Material is presented in a variety of forms to support different learning styles (Honey and Mumford, 1992). A mix of presentation styles includes graphical and pictorial formats, such as diagrams, images and block structures, alongside references and descriptions from real-life examples or experiences (Mortimore, 2003; Fleming and Mills, 1992; Pritchard, 2009). Interestingly, this approach not only aids students with learning differences but can also open up a topic for all students.

The legal requirement to support people with disability is an imperative within both universities and the workplace (Trailblazers, 2010; Disability Alliance, 2011). Consequently, disability is supported in universities in a variety of ways (Institute of Physics, 2013; Trailblazers, 2013; DMU, 2014) and the increasing numbers of disabled students gaining university degrees attests to the success of this strategy (Trailblazers, 2010; AGCAS Disability Task Group, 2013).

Similar adjustments can be made within the workplace, although providing such support can be demanding (Shaw Trust, 2009), especially for smaller organisations. Larger employers tend to be more aware of both the need to reflect diversity in their workforce and the support available to them as employers (Equality Challenge Unit, 2008).

A variety of organisations publish guidelines for those wishing to understand disabilities and their implications. These organisations include charities devoted to one type of disability, such as autism (National Autistic Society, 2012), or one type of subject area, such as STEM subjects (STEM Disability Committee, 2014). Such information is available for employers, students and their families, but it can be hard to find and hard to interpret (Baxter and Glendinning, 2011; Leko and Griffin, 2009).

The focus on employability seen in UK universities (HEFCE, 2010; HEA, 2012; DMU 2015) implies that higher education provides a successful transition platform in which a student can grow into a professional practitioner. It is to this transition that the model presented here is expected to contribute, focusing on developing self-awareness and self-determination skills.

Disabled students need to learn what practical adjustments work for them at university and then project that into their employment (Institute of Physics, 2013). Naturally, what works initially may not be suitable in the long term. Therefore, suitable adjustments may need to evolve. For example, adults on the Asperger Syndrome spectrum need intensive on-the-job training initially that can ease off as familiarity grows (Hendricks, 2010). Alternatively, for some individuals, support needs to be consistent as far as possible (Donnelly et al, 2010). Different approaches will fit different cases. Success depends on both individual self-

development and changes in the workplace to be taken into account (Hagner and Cooney, 2003).

Employability skills can be taught as part of a degree programme (Hind et al, 2007) or learned by the student on an individual basis (Hind and Moss, 2011). It is important to remember that a student's employability is not static but will develop over time. Another requirement is to help students manage their expectations and aspirations (Scurry and Blenkinsopp, 2011).

Finally, for some students, just finishing their studies can be a major challenge. It may be that students with severe and/or multiple disabilities need to concentrate all their energy on their studies, rather than simultaneously seeking employment. It may also be that they are just not ready for employment activities (Equality Challenge Unit, 2008; Cockburn, 2011).

Pilot Study and Data Collection

The team conducted several surveys and pilot studies with disabled students and placement employers over a period of four years, based at De Montfort University, Faculty of Technology. Several aspects were investigated: the ways in which students seek employment; the hurdles they encounter; how these hurdles relate to their disability; what support they receive at university; and, what support they expect to find in the workplace versus what practical support is actually available.

The conclusions drawn were as follows.

Student disability is accommodated well, with students receiving appropriate information and practical help in support of their own particular needs. This echoes the literature, which is a satisfying outcome.

Suitable accommodations are also available in the workplace, although this varies according to the size of the organisation. Large, well-resourced organisations actively encourage diversity by having in place procedures for recruiting and keeping disabled staff. Smaller organisations face various challenges in this area and, if unresolved, they may pose serious problems for disabled applicants.

One major hurdle that emerged was communication, relating especially to the application process, including interviews. Students were unsure about how to articulate their support needs to an employer during or after recruitment. Many felt unready or unequipped to discuss their support needs with employers. They were wary of appearing to be demanding and, therefore, damaging their chances. By contrast, employers welcomed open and frank discussion. This openness is something that students need to be made aware of, that an interview is a two-way exploratory activity and employers are receptive.

Another hurdle was lack of awareness. Many students, especially pre-placement ones in years 1 and 2, did not appreciate or understand how they could develop their skill sets, to make themselves more employable. In fact, many had difficulty differentiating employability and employment. This was found to be a confusion common to both disabled and non-disabled students.

The team follows British Psychological Society guidelines on ethical practices. This means the anonymity of all respondents and participants are strictly observed; all data and attributions are anonymised; data (be it on paper or in electronic form) is held securely and kept confidential; and, descriptions of research display no identifying characteristics of individuals or organisations. Moreover, the team ensures zero impact of surveys or fieldwork on participants; exercises sensitivity and professionalism at all times, recognises the need to remain detached; and honours researchers' obligations to their subjects.

Employability Model

The findings from literature survey, together with the knowledge and experiences of the team members, have been incorporated successfully into an employability model. The model uses four profiles, with a number of factors in each profile. The profiles are: academic, personality, disability, and employability activities. These profiles and their various factors are shown below, in Fig. 1.

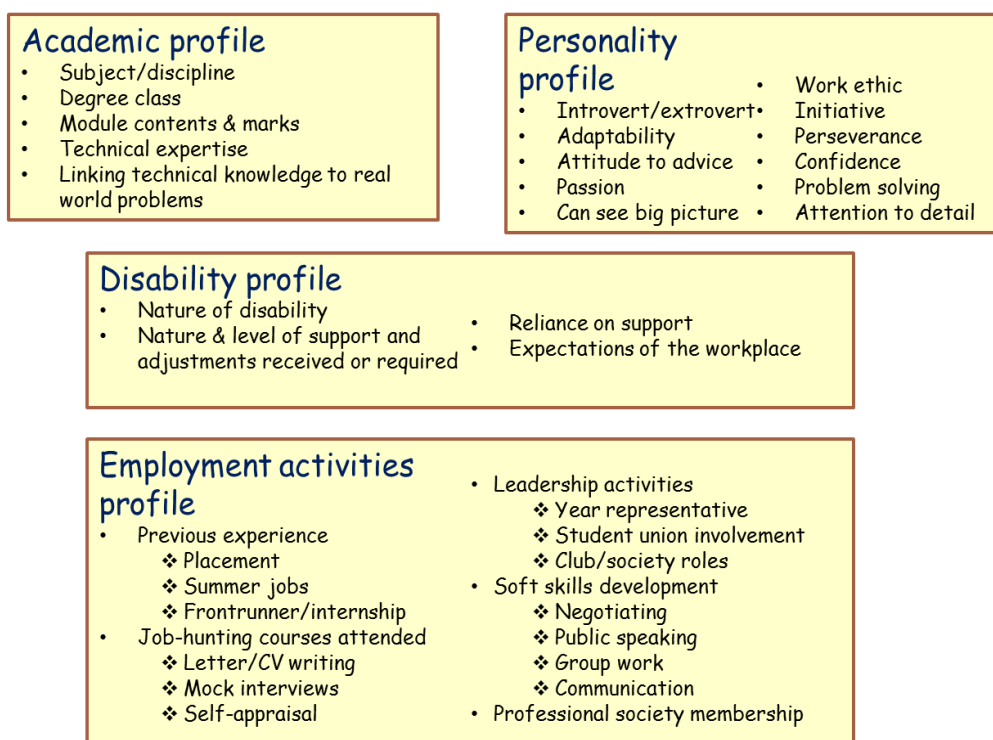


Fig. 1: Employability Model

Although the profiles appear in separate boxes, the model is intended to demonstrate the holistic nature of employability, rather than focussing on any one profile at the expense of the rest.

Employment-related requirements are inherent in the model and inform the factors within the profiles. For example, many jobs entail working with other people in large or small teams. The model brings this to the students' attention as a "soft skill" and, by implication, helps students to understand why group work forms a part of many teaching delivery schemes. Confidence is another employability factor incorporated into the model, reflecting the fact that a self-confident individual will be able to carry out work tasks more readily than someone needing constant assistance or assurance. When using subject-specific practices at work, an understanding of those practices is necessary, as reflected in the academic profile.

The underlying premise is that all students have academic, personality, employability activity profiles, while some also have a disability profile. The framework also recognises that all students might value guidance on how to develop their own skills in each profile, or know what counts as employability activity that might be of interest to a potential employer. There is an assumption that all students need guidance on knowing where to look for relevant information, and a recognition that some will turn readily to support professionals while others may not. There is also an assumption that all students would value ideas and

pointers on employment interview questions, in terms of what to expect (and how to answer) and what to ask (and how to interpret the answers).

The structure of the prototype framework builds on the model of employability as developed during the team's research. The prototype uses hyperlinks from the employability model page to further pages containing guidance and explanatory details; it currently includes a few example links to external websites with further guidance and support information. The prototype has been piloted with a range of students (from study years 1-3) and with support staff (from careers service and disability support office) at De Montfort University.

In use, support professionals would introduce the framework to an individual student and discuss what employability means to them. Following this introductory session, the student would then explore their own employability in their own time and at their own pace, over their study years.

The prototype was well-received in pilot studies, being valued by both support professionals and students. Both groups made many suggestions for further links, and suggested some style changes. The concept was very well-liked; for example, a final year student said "I wish I'd had this two years ago when applying for placement". Students valued finding so much relevant information in one place, as well as the prompt to see employability in a different light. Again, in the words of one final-year student, "it makes you think what you need for employability". Support staff taking part in a pilot study felt that it would help support the students and were eager to have it implemented for use.

Conference Workshop

The workshop was attended by approximately 30 professionals from a range of support and academic roles. The background to the framework was presented. The transition to employment was described as being supported by professional support services and standardised by using the same inclusive model for all students.

The workshop acknowledged the UK context of the framework and recognised that, internationally, student support at university worked in different contexts. Delegates might recognise some differences from their own contexts, for example in funding models and practical support provision, and also some similarities, for example in relevant guidance and, again, in practical support provision.

The employability model described above was explained as the foundation for the prototype, and the tool itself was introduced. The demonstration gave a flavour of how it could be used, introducing the audience to the four profiles in the model and following some of the links to further information.

The research team shared their vision of the tool being used to help a student understand the key concepts and explore aspects of their own employability, initially in discussion with a careers adviser or disability officer for example, but then independently by the student using the tool in their own time. Thus the student would be introduced to the idea of employability and then enabled to explore it for themselves.

Delegates contributed to a lively discussion during the demonstration. The tool was well-received, being seen as potentially helpful to all students and especially to students with disability or difficulty of any kind. There was a suggestion that it could be organised around a job search process, perhaps as part of the initial introduction by a support professional.

There was some debate about terminology. The point was made that difficulty is not confined to disability. Students might have other types of challenges, such as, for example, studying in a foreign language or being a single parent. The conclusion was that the wording in places may need to be adjusted.

Delegates were also sensitive to the word 'disclosure', which has connotations of hiding something shameful. It was rightly suggested that 'openness' or 'sharing information' would

be more positive and empowering terms, making the concept more acceptable to the student. Moreover, some of the phrases in the model might need to be explained or interpreted. A glossary or key was suggested to cater for this need.

There were also suggestions for several additional links to be incorporated, pointing to relevant websites and organisations that provide more detailed and comprehensive guidance on a range of topics.

It was suggested that the prototype could be developed as a mobile app to good effect, reflecting the way students access computer-based tools on their mobile devices. One delegate pointed out that most of the images depicting disability used a wheelchair icon, reflecting the commonly-understood shorthand in use throughout the UK.

Several people suggested including an area for students to make and capture their own notes for their own progress checking, either inside the model or outside. This echoed a similar request from the student pilot, reflecting a desire to use the tool to drive an individual exploration. There was also a plea to emphasise the need for students to match their skills and experience to the requirements of the job profile they are applying to, and to tailor their application accordingly, reflecting the language of the job profile. The tool could encourage students to think about the advertised role and what it would call on from their own skill profiles.

Subject-specific skill lists were suggested, which could be incorporated in the academic profile on the model, perhaps as a series of links behind the academic profile. Behind this profile, different wording was suggested for sample interview questions, turning them around to, for example, 'give an example of ...' or 'tell me about a time when...'

Within the disability profile, several things could be adjusted, including its title. There was a suggestion that it could be called 'possible barriers in the workplace'. Within the profile, other changes could be made. For example, the bullet points could become: situation – implications – requirements; this would encourage students to think more about the implications of the situation or challenge than about the challenge itself. Thus the bullet phrase 'nature of disability' could become 'impact of impairment'. The workshop pointed out that the distinction could be made between negotiable and non-negotiable factors, paving the way to a constructive dialogue between student and potential employer. Focusing on the needs of the job rather than the disability could be included in the model, and might be an area where the support professional steers the discussion with the student.

In the employability profile, there was a suggestion that researching the company a student is applying to should be highlighted alongside CV writing. This would link to the need to emphasise tailoring an application or covering letter to reflect the job advertisement. Part of understanding an advertised job was seen as recognising that the job profile and the individual's challenges act in synergy, and the model could reflect the need to be realistic in choosing which jobs to attempt. Another part of understanding the job market includes understanding how to read the culture of an organisation, and one delegate suggested building in relevant guidance. The employability profile box includes a wordgram of various extra-curricular activities of interest to potential employers; alongside this, the model should encourage students to become active in some way that suits their own situation and aspirations. There was also a feeling that this profile could be more employer-focused. These suggestions are currently being considered by the team and are expected to be incorporated into the next version of the prototype.

Discussion

Comments and suggestions about re-wording some of the disability profile entries and, indeed, the very title of the tool itself, echoed discussions elsewhere in the conference. It is important to maintain an inclusive view of the impact of disability and other challenges, and

to use inclusive language wherever possible. Further discussion will evolve the language that is used; in fact, the surrounding terminology has been evolving over the years and will continue to do so. Partly this reflects a growing understanding of how best to support individuals who find themselves challenged in some way, and partly it reflects a growing societal awareness of unconscious offence that can be caused by unthinking phraseology. The danger is that confusion can arise when terminology evolves in different parts of society at different rates, for example current UK legislation and student finance provision use the phrase 'Disabled Student Allowance' to refer to support funding, whereas support professionals might prefer phrases without a deficiency implication.

Suggestions had been made to make the tool more employer-focused and to include links to employers known to be 'disability friendly'. Whilst these are good suggestions and could be built in, there would also be a need to maintain independence and not seem to recommend any particular employer; links could certainly be made to groups of employers already in the public arena as working on inclusive employment practice, for example Diversity Milkround (2010) or GreatWithDisability (Cooke, 2015).

Overall, then, workshop delegates welcomed the prototype tool as one way of supporting all students in exploration and development of their own employability. Echoing the student pilot, some delegates commented that it helps a student think about themselves and prepare for interviews, and, most importantly, help them to develop their own knowledge, skills and self-awareness. The simplicity and the universal, inclusive nature of the tool were appreciated. Delegates could see how it might be used, and how it might be adapted to other contexts beyond one UK university. There was some appetite to see the work continue and the prototype develop into an implementable tool.

Conclusion

The proposed tool enables a discussion between students and support staff, and helps the student develop their skills and their ability to articulate to an employer what they can contribute to an organisation. It will also help the student and the support professionals discuss what workplace support they might need in order to maximise that contribution, and the student then learns how to articulate that to an employer.

This tool is an aid to exploration of employability and what it means to an individual student. This approach to the transition from HE to employment is supported both by careers and disability professionals working with students, and by the tool aiding the student's exploration of their own employability. The supportive element also derives from support professionals' insights feeding the content of the model. The approach is standardised in the sense of being inclusive, supporting all students whatever their individual challenges. It is also standardised in the sense that all students within a faculty or institution would have access to the same framework. Detailed content can and should be tailored at whatever level an institute deems appropriate, for example faculty or subject. It is entirely possible that groups of institutions might find collaboration productive.

Further work

A new version of the prototype is being built, incorporating the recommendations and suggestions of the pilot participants and workshop delegates. Feedback from potential users will continue to be sought, until the prototype evolves into a robust tool.

The intention is that support staff should be able to adjust the content as appropriate, to include new links and information, as they arise. This is to maximise the relevance of the tool to support professionals in building it into their support provision to help students develop their own skills, awareness and understanding. Another important factor will be to

build the use of the tool into existing practices, as seamlessly as possible, which is a vital step in implementation.

A further step would then be to assess the impact of the tool on student self-awareness and on support staff discussions with students. This implies a base-line measure of some kind followed by a post-implementation measure some months or an academic year after implementation; further work is needed in order to define what those measures might look like.

Reporting back to a future NADP conference would then allow the discussion and consideration of sharing the tool with a wider audience.

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Thinking and Practicing Differently: How Disability Studies Can Inform Service Delivery

Kroeger, S and Muller, C
University of Arizona

Introduction

Disabled people share a history of oppression that included abuse, neglect, sterilization, euthanasia, segregation and institutionalization. Elements of this history remain part of the disability experience today. In the United States, approximately 56.7 million citizens have some kind of physical, sensory, cognitive, or emotional impairment and they are the poorest, least employed and least educated. (U.S. Census, 2010).

While impairment has been around since antiquity, disability is relatively new as a socio-political category. Disabled people have been organizing for more than a century, but it wasn't until the 1970's that disability crystallized as a civil rights issue. The Women's Movement and the African-American Civil Rights Movement in the U.S. inspired various disability groups, and they began coming together to establish a new and more positive identity to counteract the impact of the negative descriptions used by the majority culture. Over the years, U.S. disability rights advocates have scored significant victories, the most notable, the passage of the Americans With Disabilities Act (ADA) of 1990, and most recently the ADA Amendments Act of 2008. Additionally, alongside the political movement, there has been the emergence of disability studies.

Disabled scholars, artists, writers, and activists now challenge conceptualizations of disabled people as deficient and less than human; and instead celebrate impairment as a facet of human diversity. Disability Studies reframes the analysis of disability by focusing on the conditions that primarily produce disability: the physical, technological, educational, social, political, economic, medical, and legal systems/structures that create barriers for disabled people.

However, there is no comparable degree of discussion on the role that disability service professionals play in promoting and replicating a deficit frame of disability. The challenge for disability studies and disability services is to build an alliance that will work toward applying the broad reframing of disability to the service professions. There is no better place to experiment with this than college/university campuses and there is no more important campus professional to embrace and promote this change, than the disability service provider. This paper will review disability conceptualizations and professionalism and explore one institutions' experience with aligning disability studies and disability services.

Disability Models

Disability models, frames, or narratives like the medical/individual model and the social/interactional model are not actually theories, but conceptualizations and as Michael Oliver argues, "practical tool(s)." (2004). A basic understanding of society's dominant narrative around disability as well as the new narrative being promoted by Disability Studies scholars, activists, and artists is critical.

Medical/Individual

Historically, scholars, professionals, politicians, and much of the public have held a relative consensus of opinion regarding the nature of disability. They have thought of and treated disability as an empirically measurable limitation in functioning linked to an underlying physiological deficit that prevents a person from performing "normal" tasks or appearing

“normal.” They did not distinguish between impairment and disability and seek to cure, correct, or eradicate it.

Most of us are not conscious of it, but we do have daily contact with this model. We pay scant attention to it because it is consistent with how we’ve been socialized to think about disability. The most dominant and influential areas that promote, replicate, and reinforce this model are language, media, educational courses/programs, and design.

Language: The language that frames disability and disabled people is mostly negative. The words convey tragedy (tragic, unfortunate), pity (pathetic, needy), inspiration (courageous, overcome her disability), passivity (wheelchair-bound), victimization (suffers from or is afflicted with), and low status (special, incapable, helpless). The impact of these words on disabled people’s identity as well as their impact on society’s notions of disability is significant.

Media: Media and popular culture (movies, books, plays, television, magazines, newspapers, advertising) interpret human events and are an important source of knowledge and insight. The media is a significant “framer” of disability. People with disabilities are often rendered invisible, leading to the mistaken belief that such people do not exist, or are insignificant in society. The media present disabled people as one-dimensional and objects of ridicule, pity, and humor. By linking disability with these themes, the media perpetuates prejudices that result in fear and intentional exclusion.

Educational Curriculum: From kindergarten through postsecondary education, disability is either not represented in the curriculum at all or is represented as a personal tragedy or as an inspiration to others. Additionally, it is usually relegated to a specialized applied field, like medicine, special education, and rehabilitation where it is pathologized and individualized and where treatment is emphasized.

Design: Design of our environments, like our language is a great framer of human identity. One can see how disability-related language perpetuates disabled people’s status as invisible, unequal, negative, and deficient. Similarly, the design of our spaces, buildings, information systems, and policies and procedures reinforce norms that exclude rather than include. Examples are uncaptioned videos, exams with strict time limits, print-only textbooks, arbitrary policies that exclude people with specific impairments from jobs, and data systems that are incompatible with adaptive technology. Society’s view of disability is pervasive and consistent and clearly locates the problem of disability within the individual.

Social/Interactional

More recently, many activists and scholars have developed perspectives on disability that center on the notion that it emanates not from physiological or cognitive difference or deficit in isolation, but in the interaction between the individual and larger social values, practices, and structures. Disability Studies has fostered and developed this notion of interaction, and in the process has transformed the understanding of disability from an individual deficit to a complex byproduct of social, environmental, and biological forces.

This new perspective on disability elucidates how individuals designated “disabled” are treated collectively in a manner that diminishes their economic, interpersonal, psychological, cultural, political, and physical well-being, relegating them to membership in a socially marginalized, disadvantaged group. Shakespeare (2012) notes that social model thinking distinguishes impairment (individual, private) from disability (structural, public), and mandates barrier-removal. Furthermore, disabled people are an oppressed group and professionals and charities are causes or contributors.

Universal Design: If we embrace new thinking about disability then we must begin to respond differently. In other words, if we relocate problems/issues away from the individual and onto our systems and structures, then what we do and how we do it must change.

If we pay attention, we can see that design is everywhere. We can see it in our buildings, policies, services, processes, websites, information systems, and academic programs and courses. Universal design is an approach that values and celebrates human diversity. Above all, it is consistent with the paradigm shift noted above – from treating people as dependent, passive recipients of care and services, to treating everyone as equal citizens - from defining issues and needs as problems within individuals, to identifying issues and needs as design problems in the environment. In an ideal world, we wouldn't need the term universal design, because it is what good design would be. (Preiser & Ostroff, 2001)

The Center for Universal Design formulated seven principles in 1997, to articulate the concept of universal design in a comprehensive way. These principles can be applied to design of all environments and include such concepts as equitable use, flexibility, simple & intuitive, low physical effort, perceptible information, tolerance for error, and size and space for use (<http://www.design.ncsu.edu/cud/>).

Articulating and describing attributes that make design work for the most people possible without the need for individual accommodation is an effort at inclusiveness, but is not a trivial challenge. Developing checklists for designers is a start, but they will never create flawless design. And while good design should alleviate the need for individual modification, perhaps it should also allow for it, easily and conveniently. For example, can systems be designed so that deaf students can request and schedule accommodations online rather than in person (sign language interpreters, test accommodations). It is also important to remember that 'universal design' is not just beneficial to disabled people nor does it exclude the possibility for individual modifications or adjustments (one size does not fit all).

The Service Industry

A key philosophical construct of the social/interactional model is locating the "disability problem" primarily in the environment and away from the individual as much as possible. This shift must happen in the powerful service industry if we truly want to advance the agenda of full access and inclusion. But we are held back in this regard not only because of service providers' outdated thinking about disability, but also by their respective notions of professional and professionalism.

John McKnight, in his book, "The Careless Society," points out that societies of today are based on service and that people are service providers and/or service consumers (professionals and clients). The professionals have a great deal of power in that they control the evaluation of clients, the identification of problems, needs, and solutions; and the assessment of professional effectiveness.

McKnight (1995) and Swain, Cameron, and French (2003) discuss the effects of the professionalized definition of need, which is the translation of need into a deficiency or deficit, followed by placing the perceived deficiency in the individual. Thus, needs, like disability, are pathologized and seen as an individual problem rather than a systemic one. Common service delivery practices separate the individual from the environmental context. In essence, the individual is the focus and oftentimes blamed rather than considering social and environmental factors.

This professionalized definition of need produces a key assumption: as the individual is the problem, the professional is the answer. In the end, the individual is viewed as deficient and the social/environmental factors continue to create barriers to full participation.

Unfortunately, the disability service industry, including disability services in higher education, generally has not engaged in any consistent and meaningful way with disability studies, nor problematized its professional practices. Indeed, it is the service industry and the professional service providers that help maintain the very paradigm that activists and scholars so loudly oppose.

Disability Services In Higher Education

The Disability Service (DS) office on a college campus is the entity usually entrusted by campus administrators to address all issues related to disability. This role means that DS staff has responsibility for ensuring the institution remains in legal compliance. They spend the majority of their time requesting and reviewing disability documentation and determining and coordinating individual reasonable accommodations.

Operating primarily within a legal narrative and a deficit frame of disability, most DS offices are oblivious to the underlying negative messages about disability that they send. It seems that most DS service providers have not taken the time to identify the values and beliefs they have about disability and how these guide their work. Moreover, individuals working in DS offices have little academic experiences that would provide them the opportunity to frame disability differently, with the majority coming from such disciplines as special education, rehabilitation, social work, counseling, etc. Because they typically and mostly without thinking, frame disability as abnormal, negative and an individual problem, then it follows that their response to it would be reactive rather than proactive. In other words they accommodate disability. While this is an improvement, accommodations as a comprehensive response maintains the notion that access is a disabled individual's problem to solve.

Even after exposure to disability studies and new ways of conceptualizing disability, service providers have been challenged to shift their professional practices. Interestingly, it is DS offices that lead their institutions in maintaining the dominant disability narrative.

In conversations with DS administrators at conferences, more and more of them recognize the need for more information about the core Disability Studies concepts. Without consistent exposure to Disability Studies and how to “walk/roll” the talk, service providers will continue to translate need into deficiency, locate this perceived deficiency in the individual student and establish policies, procedures, and practices that perpetuate a deficiency model on their campuses. Most faculty, students, and administrators engage in this system, as it fits with their understanding of disability.

Reimagining and Redesigning Disability Services: A Case Study

The Disability Resource Center (DRC) at the University of Arizona has been working to shift professional thinking and concomitant practices for over twelve years. DRC now leads its campus and the profession in the pursuit and implementation of well-designed and accessible campus learning, working, physical, and electronic environments. It also promotes a view of disability that places it in social, cultural, and political contexts. DRC works to infuse a social model of disability and principles of universal design into their own operations so as to align their thinking and practices and serve as a model to their campus. These efforts exceed that of any other institution in the United States.

Toward that end, the DRC has shifted its focus away from the individual and more to the environment. DRC works to have its processes be easier, the work more proactive, and the campus environments more sustainable. Specific goals of the DRC include:

- Provide leadership to the campus community by modeling a social model of disability
- Align a social model of disability with DRC systems, structures, and practices
- Ensure a disabled student experience is comparable to a nondisabled student experience
- Promote social justice and sustainability

The University of Arizona has an enrollment of 40,000 graduate and undergraduate students, Approximately 2,500 students identify as disabled, and about 1,800 utilize

accommodations through the DRC. The DRC has been an integral part of the campus for over 40 years. What follows is a snapshot that illustrates DRC's process and outcomes. To achieve its goals, DRC first worked to ensure that all staff understood and could articulate the core concepts of Disability Studies, i.e. social model. DRC staff members were well versed in the medical model, having come from applied fields such as rehabilitation counseling, special education, and social work. While they understood social justice, their experience with it was mostly in terms of race and gender. Staff development efforts were focused and consistent. Facilitated conversations informed by Disability Studies around books, movies, design, curriculum, service delivery practices, and the service industry occurred regularly. Looking back it is interesting to note how socialized we all are in the medical model and how difficult it is to shift our ways of thinking about and responding to disability.

Over time, it became apparent that the DRC was thinking differently, but behaving the same. Staff learned to articulate a social model frame, but did not have the fluency to actually operationalize it. Thus began the slow and challenging work to infuse social model thinking into every aspect of the operation.

Language

The first area that DRC focused on in the implementation of the social model was language. Language is powerful and because it narrates a certain conceptualization of disability, the DRC believed that immediate changes were crucial.

Staff analyzed its use of disability-related and 'helping services' language. Helping services language consists of words such as; need, support, allow, service, assistance, etc. As staff analyzed the use of these words, they recognized that they were inadvertently reinforcing deficit thinking by keeping the focus on the individual as the problem. The same was true in the analysis of disability-related language like special, compliance, needs, able, able-bodied, etc.

As a result, language changes occurred throughout the organization, specifically in office title, office mission, job titles, job descriptions, website, eligibility, service delivery practices, and conversations with disabled students, faculty, and colleagues.

As an example of this shift, note the old DRC mission statement:

The Mission of the disability service office is to provide and coordinate support services and programs that allow students with disabilities to receive equal access to an education within legal mandates (ADA) and to be judged on their abilities not their special needs.

When looking at this statement through a critical lens, staff found problematic words, like provide, support services, allow, legal mandates, and special needs.

A revised mission statement now reads:

Disability Resources works to create inclusive and sustainable learning and working environments and facilitate access, discourse, and involvement through innovative services and programs, leadership, and collaboration.

The DRC mission statement now represents disability as an aspect of diversity and access as an issue of social justice, and equity

Job titles and job descriptions were also updated to support new thinking. Examples are:

- Disability Specialist changed to Access Consultant
- Student Testing Coordinator changed to Exam Administration Coordinator
- Student Assistive Technology Coordinator changed to IT Accessibility Consultant

A previous job description for "Disability Specialist" read:

The Disability Specialist establishes student disability status and eligibility for accommodations. Reviews disability documentation, determines accommodation plan, coordinates services, and provides advice, advocacy, and referrals to students.

Ensures best practice with legal mandates and University policies while minimizing the University's exposure to risk.

A new job description for "Access Consultant" reads:

Informed by Disability Studies and Universal Design, the Access Consultant works directly with students to identify barriers in the environment and respond to requests for reasonable accommodations. The Access Consultant works with students, staff, and faculty to improve accessibility on campus with the ultimate goal of ensuring that disabled students have full access to their University experience.

The focus now is on locating the problem or barrier in the environment and working on ways to ensure access with more collaboration.

Service Delivery Practices

Even though DRC's goal is to have disabled students' experience be comparable to that of their non-disabled peers, old eligibility practices and service delivery practices were getting in the way. The old eligibility statement read:

Services are available to students with diagnosed disabilities. Examples of such disabilities include: Learning Disabilities and Attention Deficit Disorders, Mobility and Sensory Impairments, Neurological, Psychological and Medical Disabilities. Federal laws governing access for students with disabilities stipulate that educational institutions may require documentation of disability prior to delivering services.

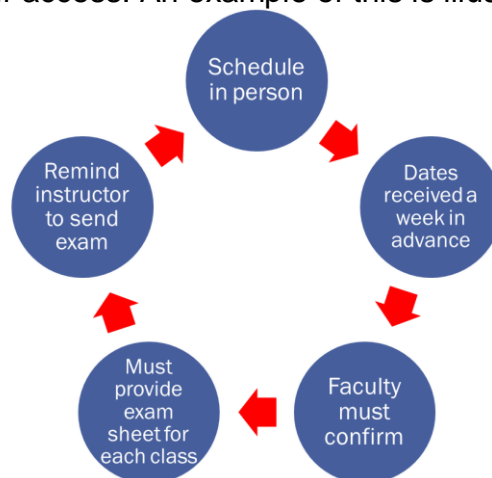
The focus is on documentation, proof of disability, fitting into a specific diagnostic category, and following federal regulations.

The revised eligibility statement reads:

Everyone is unique. A conversation about your experiences and expectations will help identify the information necessary to support your accommodation requests. Helpful information may include: medical records, psychoeducational test reports, or school records. Don't delay completing the Accommodation Request Form if you don't have any formal disability-related paperwork.

In this version, DRC acknowledges that individuals are unique and that they are the experts regarding their disability experience. Their story is privileged. Students are not burdened with proving they are disabled and DRC staff come to know them as individuals without being biased by professional documentation. Should a request from a student, and their explanation not make sense, additional information can be requested.

DRC staff came to appreciate that its practices placed a great deal of the burden for access on students. This reinforced the notion that disabled students were the problem and were primarily responsible for their access. An example of this is illustrated below:



This was the cumbersome nature that students using testing accommodations were asked to do. A non-disabled peer need only get out of bed and show up to the classroom to access their exam, while disabled students were required to plan weeks in advance. The DRC now has an online portal that students access to request exam accommodations. They must still provide exam dates, but their overall experience is now much similar to that of their peers.



Outreach

The DRC has become more proactive in its outreach efforts. Communication with faculty previously entailed providing disability specific information, disability etiquette, legal requirements and student/faculty roles and responsibilities. Now the focus with faculty is on the design of their courses. Staff work with instructors to identify access barriers and options to either remove the barriers (redesign) or to provide accommodations as seamlessly as possible. When a faculty member understands that the problem is the design of their course and that there are readily achievable ways to not only make it accessible, but oftentimes improve the experience for all students, they become engaged.

Disability awareness events are widely used to increase sensitivity toward people with disabilities. These events mostly focus on etiquette, simulation, understanding disabilities, myths, and compliance. Oftentimes, people leave these events confirming that disability is a tragedy, thanking their lucky stars that they are not disabled, or falling prey to the “they are amazing” syndrome. The DRC recognized that this was another important area that needed to be aligned with social model thinking. The DRC now works directly with event planners to help develop activities and programs that will reframe society’s conceptualization of disability and relocate the “problem of disability”, celebrate the experience and history of disabled people, and identify strategies for designing inclusive communities. The DRC prompts event planners to ask reflective questions such as what do you want participants to learn? and how would you program around another identity group?

Educating within a social justice frame might include reading and discussing first person narratives; studying the impact of design; hosting disabled authors, artists, performers; attending wheelchair sports events; and participating in disability activism. The DRC established a “Disability In The Academy” series and a Disability Justice workshop with such topics as: disability in poetry, disability identity, disability oppression, disability history, etc. The DRC has spent and continues to spend a great deal of time editing its website to ensure that its language, service delivery practices, and outreach efforts are in sync with social model thinking. Additional areas of analysis and modification have included funding structure, requesting and receiving accommodations procedures, documentation, advocacy, student development, syllabus statement, and faculty notifications.

Conclusion

Disability service providers in higher education are very influential in shaping how campus communities define and conceptualize disability. They proclaim ‘social model’, but they primarily work with individual students, clarify functional limitations, and prescribe accommodations. A dissonance between their rhetoric and practices is revealed and they reinforce the belief that disabled students are needy and problematic. While these current practices are an improvement over institutionalization and segregation, they do not produce

equity nor challenge the medical model of disability. In reality disability service providers are asking disabled students to be satisfied with an unsatisfactory situation.

Transformation of the disability service industry could very well begin with disability services in higher education. Developing a critical voice, aligning systems and structures with social model thinking and principles of universal design; and becoming agents of social change is the good work that needs to be done.

“The journey toward social justice requires time, patience, and collaboration. “The true sign of success is not whether we are a source of perpetual aid that helps people scrape by - it’s whether we are partners in building the capacity for transformational change.” (Obama, B. (2009). Remarks by the president to the Ghanaian parliament. Ghana, Africa: US Government. Retrieved July 14, 2009 from

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National Association of Disabled Staff Networks (NADSN) – “Our Stories: Experiences from our Disabled Staff Networks across the UK”

Linda Robson, The Open University, Mona Patel Manchester Metropolitan University,
Jacquie Nicholson, University of Edinburgh

Abstract

The National Association of Disabled Staff Networks (NADSN) held a panel session at the National Association of Disability Practitioners (NAPD) 2015 annual conference to share experiences from Disabled Staff Networks across the UK. Interestingly, it was the only workshop at the event exploring disabled staff experiences and best practice, whilst all the others focused on services to and support for students (NADP, 2015). This article summarises and expands on the discussion, but is not intended to be a comprehensive guide to disabled staff networks.

A Need for Disabled Staff Networks

The Equality Act 2010 places a duty on HEIs to monitor and publish information about their equality behaviour. It also places a responsibility on employers to support integration of disabled staff within the workplace. Whilst much of this responsibility is carried out through individual adjustments and agreements, the ethos of the Act was also to engender cultural and attitudinal change throughout workplaces in order to ensure that disabled employees are both enabled and more importantly, they are valued.

One of the mechanisms by which HEIs ensure that their policies and procedures are effectively meeting people's needs, promoting equality and valuing diversity is through the establishment of staff networks. It is certain that direct engagement with staff can help to shape and improve an organisation's policy and practice (Department for Work and Pensions Office for Disability Issues, 2014).

Staff networks facilitate peer support, sharing of experiences and development of best practice within organisations. Sharing of personal experiences motivates staff, who see other individuals having made progress and raises awareness of possibilities for overcoming challenges. Staff networks help individuals find others who face similar challenges and allow group creativity to be employed in seeking new responses to particular challenges.

Networks are likely to be better placed to address organisational culture issues than individuals. Robert and Harlan (2006) highlight workplace discrimination being manifest in three ways; marginalisation, fictionalisation and harassment, all of which may operate at local and organisation wide levels. Having a staff network allows identification of issues across the organisation so facilitating identification of systemic issues, and a safe forum for individuals to raise concerns, which can then be collectively addressed.

There is evidence to suggest that in the general working population, staff satisfaction amongst disabled staff is lower than reported across all staff. It is also apparent that the satisfaction gap widens as general staff satisfaction falls (Schur, et al., 2009). The Higher Education sector is currently facing financial cuts, leading to increased pressure on staff and an associated reduction in staff satisfaction across the board (Bishop, 2014). Consequently, it is likely that disabled staff in the HE sector will be suffering from reduced morale and would benefit from the support of a peer network. However, there needs to be greater senior management buy-in within HEIs to promote greater network engagement.

Network names and ethos

Not exclusive to the Higher Education Sector, there are broadly two options for the ethos and naming of a staff network:

- A support group for disabled staff, simply called Disabled/Disability Staff Network or Forum. Usually membership is drawn exclusively from disabled staff who provide peer support and raise awareness.
- A group with wider membership to support inclusion and integration of disabled staff in the workplace, usually having a variation of Able or Enable in its title.

These groups encourage more engagement of non-disabled staff in the network in recognition that colleagues and managers may need support in addition to those with the disability.

These descriptions are the two extremes of a continuum, in reality, most networks address both support and inclusion issues but their position on the continuum is linked to their focus and strategy. The two approaches are different, rather than either one being better.

The Equality Act 2010 defines disability as “A physical or mental impairment [which] has a substantial and long-term adverse effect on his or her ability to carry out normal day to day activities”. (Equality Act 2010 section 6)

Some individuals may come under the legal definition of disability but not identify as disabled, and vice versa. A network that is exclusively for disabled staff, may exclude these two groups of individuals. Whilst there is no legal requirement to have consideration for those not included in the above definition, there is a moral and ethical imperative. Some of these individuals may also need support around defining their situation, which may be improved, through access to support, through establishing disability identity.

Those who fall within the legal definition but choose not to identify as disabled may also be excluded from a network exclusively for disabled staff, as membership requires accepting a label that they do not identify with. This can be particularly challenging for individuals with hidden disabilities, including specific learning difficulties and mental health conditions, who may fear stigmatisation if they reveal their condition to colleagues. Those with seen disabilities may also fear stigmatisation, but do not have the opportunity to hide their difference. A network which is open to all interested staff removes the assumption that members have a disability.

However, this is not the only reason for having a support network open to all staff. Effective integration of disabled staff in the workforce requires all colleagues to have knowledge and understanding of disability issues. Many line managers need help in supporting disabled staff. They may not understand the challenges or how to overcome them, and often find it difficult to raise issues with individuals due to feeling uncomfortable talking about disability and have a fear of offending (Robert & Harlan, 2006). A staff network may be able to offer support to managers who need advice on the best practice in managing disabled colleagues as well as to ensure their teams can work together in harmony.

Funding and resource

In common with other staff networks (BME, LGBT, Gender etc.) there is very little, if any, funding and resource available for disabled staff networks.

Within NADSN, where resource is provided, there is a range of different models of support received by individual networks from their HEI. Resource and funding is needed for the setting up, operation and ongoing costs associated with disabled staff networks.

Some examples of practice within NADSN include:

- Manchester Metropolitan University provides the network with Terms of Reference and Co-chairs a workload allocation of approx. 20 hours per term along with an Administrator from the Equality & Diversity team to service each meeting. Their Vice Chancellor endorses this.

- The University of the West of England provides employees up to 15 hours per year to attend meetings, funding for activities and events and actively encourage engagement and participation in their staff networks (UWE, 2015).
- The University of Manchester provides financial support to the network for refreshments and a palantypist to provide live speech to text reporting (University of Manchester, 2015).
- The Open University provides paid time for network coordinators to work on network activities, the use of computing facilities, equipment and other resources, the use of training and meeting rooms as required and funding for start-up costs, programmes, publicity and events (Open University, 2015)
- The University of Edinburgh provides refreshments and the free use of meeting rooms for quarterly meetings (University of Edinburgh, 2015).
- Many HEIs promote their staff networks on websites (either internally or externally) and as part of new staff induction.

Although a number of institutions allocate time for individuals with particular posts to carry out network duties, we did not have any examples of individuals feeling that they were actually released from their substantive roles to carry out these duties.

Nominally allocated time for DSN leaders to carry out disabled network business is mainly for organising and attending network meetings. In some cases this extends to attending Equality and Diversity Committee meetings in order to represent their members. We did not have any examples of individuals being officially released to carry out roles associated with network organisation more widely, or to represent their network at national events.

Some NADSN members attending and presenting at the NADP conference had used annual leave and their own personal financial resources to attend. Only one member had secured funding for conference attendance in their role as Chair of the DSN. Where there was a professional interest in the conference workshop sessions focussed on students, funding has been secured from employers for attendance but this was not in support of the activities of the disabled staff networks.

The time commitment involved in DSN's relies, in the main, on the personal time of network members. All the networks represented at the panel discussion reported difficulty in achieving engagement because staff do not have time to be involved. Individuals with workplace adjustments to their working hours or patterns may feel unable to take time out of an already adjusted working day, especially if non-disabled colleagues see their adjustment as a "perk" (Schur, et al., 2009). There were reports of direct comments from managers who question the amount of time staff take, even in cases when meetings are arranged during staff lunch breaks. The workplace culture can have a significant positive or negative impact on how comfortable staff feel in attending network events. Practical resources can also have an impact as it may be difficult to book accessible adequately resourced spaces for meetings.

Although some HEIs offer career and personal development programmes specifically targeted at disabled staff, we are not aware of any funding allocated to the training of staff with formal DSN roles and responsibilities. In 2014 Disability Rights launched the Leadership Academy Programme (Disability Rights UK, 2015) providing career development training run by and for people with lived experience of disability and/or long term health conditions. Similarly Kate Nash Associates provide training and opportunities for staff involved in network development to learn from each other and share cross sector experience in demonstrating the values of disabled staff networks to their organisations. Programmes such as these offer opportunities for disabled staff to develop leadership skills to bring back to the workplace for the benefit of the organisation.

Individuals who volunteer to take on specific roles within DSNs are already showing leadership tendencies, and so should be supported to develop these skills both to support the network and also to promote the individuals career and professional development. It is likely that in addition to network benefit of such training, the institution more widely would benefit from investing in staff in this situation who can subsequently take on formal leadership roles and act as role models for other disabled staff. Enabling access to these requires both time and financial resource commitment from employers. More commonly support in setting up networks and learning tends to take place informally through peer networking, particularly through the invaluable sharing of experience. There are many examples of shared learning and mutual support provided to developing networks by the more experienced network leaders. Kate Nash highlights that the active support of networks is a 'direct demonstration of an employer's level of commitment to disabled employees' (Nash, 2009, p. 18). NADSN shares Kate's hope that employers will continue to recognise the benefits of networks to their organisations in supporting employees and provide the resources to enable disabled staff networks to flourish.

Reasonable adjustments

The provision of reasonable adjustments is to create a 'level playing field'; to alleviate the impact of disability so there are many instances when individuals with different disabilities can assist each other in identifying useful adjustments. However, within any discussion of disabled staff needs, the question of what is reasonable is always contentious. Whilst some adjustments are easily agreed to be "reasonable", there is often disagreement between employers and employees regarding what workplace adjustments should be put in place; sometimes even when a medical practitioner will have recommended these adjustments. One frustration reported by the disabled staff networks was that our institutions make fantastic provision for students but frequently staff are not able to access the same level of service. Universities invest extensive resource and employ specialist staff to support a wide range of student adjustments but frequently this expertise or level of support is not made available to staff. In one instance a member of staff had been advised to register as a student in order to access better support for their disability.

Delegates raised another important point: Some institutions develop good policies to support and manage disabled employees but in reality, they are not implemented effectively nor consistently which raised the matter of lack of monitoring and accountability. Therefore, it is crucial for managers to have the confidence to have those conversations and the 'know-how' to expedite adjustments.

Working with other staff networks

It appears to be common across most HE institutions for senior management to encourage the staff networks to work together. One institution reported a staff network picnic which brought together disabled, gender, BME and LGBT network members to "get to know each other" and offer mutual support. There was considerable discomfort felt around this type of event, which lacked a clear purpose and led to some awkward situations around identity: is the white able-bodied woman there because she is a woman? Or because she is from an ethnic minority, has a hidden disability, or is a lesbian or is she transgendered? She may have chosen to declare her position within one or all of the networks but might not wish to share that aspect of her identity amongst other groups. This also highlights the need for institutions to consider the impact of intersectionality and socio-economic disadvantage on staff or rather how inequalities can occur on a multi-dimensional basis.

However, there are situations where the networks can usefully work together and may face mutual challenges. By definition, being part of a minority group brings challenges of

promoting understanding of your needs and acceptance amongst the wider population. Networks can promote a general culture of inclusion within an institution and support each other through sharing communication and promoting awareness of each other issues or concerns. With awareness that all staff networks suffer from a lack of resource, it may be appropriate to share representation on university committees and divide general equality and diversity issues across the groups. Where this approach is taken, care needs to be taken to ensure that all the groups are represented, as someone from outside a particular group may not be aware of all the issues.

Looking forward

Whilst there are clearly many issues still to be overcome for disabled staff in HE institutions there should be a positive look to the future. Increasing numbers of institutions have disabled staff networks, often championed by senior managers, and there appears to be a slow culture shift towards anticipation of need and promotion of inclusion. HEIs clearly valuing their positive disabled role models and champions will help to encourage other disabled staff to challenge and thrive.

Benchmarking of institutions in relation to their support for both students and staff with disabilities is increasingly being adopted.

Launched in 1990, the Positive About Disabled People 'Two Ticks' symbol developed by the Jobcentre Plus has become a common and highly recognisable feature on job advertisements and application forms in the UK. The symbol is awarded to employers who make five positive commitments regarding the treatment of disabled people within recruitment, training and retention processes, and have sought to raise disability awareness within their organisations.

Unfortunately, Bacon and Hoque (2014), found that just 15% of organisations awarded the Two Ticks symbol adhered to all five of its commitments, with 18% of those signed up not fulfilling any of them, and most (38%), only keeping one of the promises. This belief of the symbol merely being an 'impression management' tool has been echoed by disabled staff. In 2005, the Business Disability Forum (BDF) developed the Disability Standard, which is an online tool used to measure and improve performance for disabled employees, service users and stakeholders. Unfortunately, very few HEIs have signed up to this Standard. This may be due a variety of reasons, such as the cost (cuts in university budgets), lack of clear 'incentives' (unlike other Charters), a lack of staff commitment and/or resources to complete the assessment (it's an intense and rigorous exercise) and/or maybe due to the sheer fear of their reputation by 'putting one's head above the parapet'. Thankfully, the BDF has recently launched an HE focused group which is likely to be promoting the Disability Standard benchmark specifically in HE institutions.

The Equality Challenge Unit (ECU) are expanding their considerations for the Athena SWAN Charter to include disability and race as well as gender. As Athena SWAN status is linked to research funding this is likely to have a significant impact in raising the strategic importance of institutions addressing disability issues.

A take up of disability equality initiatives or cultural change activities such as these will ensure meaningful benchmarking across the sector and will get senior staff to sit up and take action. Robust and transparent monitoring will provide an evidence-base for organisations that identifies areas for development as well as highlight strengths.

As David Ruebain, Chief Executive of the ECU stated in a recent Equality, Diversity and Human Rights Conference "Competition between institutions can be both an opportunity and a threat to equality good practice" (Liverpool John Moores University, 2015).

Accessible guidance, clear reporting structures for networks, mandatory disability action-related training (for staff and managers) as well as celebration of disability achievements are

integral to promoting systemic change. NADSN proposed the idea to develop guidance to help HEIs set up stimulating networks and support their disabled staff and their managers. It is hoped that this would be achieved in collaboration with the BDF, ECU and Kate Nash Associates who have exemplary best practice and expertise in this field. Opportunities for our diverse workforce are greater than before, but there is still a lot more to be done to transform the sector. Not only is there a moral case for the development of disabled staff networks but there are very strong business benefits for everyone too leading to a disability confident HEI/organisation with a productive and content workforce where everyone can flourish to the best of their abilities.

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Is there a link between perceptual talent and dyslexia?

Sara Kramer

Abstract

Early models of dyslexia were defined by deficiencies or failings. More recent models shifted the focus to an awareness of differences with Ronald D. Davis one of the earliest to focus on strengths and to argue that dyslexia was the result of perceptual talent. Very few objective studies have been done to compare the spatial or perceptual abilities of individuals with dyslexia with those of people who do not have dyslexia, and the evidence has been conflicting. A small number of studies found evidence that people with dyslexia have strengths in global visual-spatial skills.

Empirical research was undertaken to assess whether the four component parts of Davis' perceptual talent were more evident in a small group of people who had been diagnosed with dyslexia than in a comparative group that was screened as not having dyslexia. This was done through personal interviews which included Davis' Perceptual Ability Assessment, quantitative analysis and a discussion of thinking styles. It was concluded that, whilst no difference was found in ability to visualise an image in 3D, the participants with dyslexia did have a greater ability to experience mental images as real-world phenomena, to intentionally access the brain's perception distortion function, and a preference to think non-verbally. This supports Davis' assertion that there is a link between perceptual talent and dyslexia.

Introduction

I have been a licensed Davis Facilitator for over a decade and have personal experience of the improved literacy skills and confidence that are the result of the Davis Dyslexia Correction programme. Ronald D. Davis' work (1994, 2004) is based on the belief that dyslexia is characterised by perceptual talent rather than impairment, and accordingly the Davis methods provide learning support strategies by building on strengths, rather than utilising language-based methodologies.

The aim of this paper is to interrogate the basic premise that underpins the Davis support strategies; that there is a link between dyslexia and perceptual talent.

Historically models of dyslexia had a primary focus on deficit (Sinclair 1948, Critchley 1968, Tallal 1980 & 1984, Geschwind 1999, Snowling 1998, Wolff and Bowers 1999, Stein 2001, Bucci 2008, Fawcett and Nicholson 2008). The work of authors Thomas G. West (1991) and Davis (1994) re-framed dyslexia as a 'difference' and contributed to a shift to models which acknowledged differences or embraced neurodiversity. More recently, neurological differences have been identified through MRI and PET scans (Shaywitz 2003).

Research studies (Snowling 1998, Miles 1999, Fawcett and Nicholson 2008) tended to rely on quantifiable outcomes but no research was found which made a comparison of the cognitive 'experience' of dyslexics and non-dyslexics when approaching a problem that internalises perceptual ability. Some evidence has been found of greater creativity (West 1991, Shaywitz 2003, Wolff and Lundberg 2002) but only Silverman (1992) found evidence of enhanced visual-spatial ability. However, this lack of evidence may have been due to limitations in the research tools (Morgan and Klein 2000). Von Karolyi and Winner (2003) attempted to overcome these concerns through the use of real-world assessment tests and concluded that dyslexia should be characterised by a talent in global visual-spatial processing as well as a deficit. Attempts to test these results further were largely contradictory (Brunswick et al 2010).

Despite the limited amount of empirical evidence of perceptual talent, there is a growing body of evidence of dyslexics excelling in jobs requiring creativity and holistic understanding of a problem. Logan and Martin (2012) estimate that the occurrence amongst entrepreneurs is double that of the general population and Wolff and Lundberg (2002) estimate that the prevalence is up to three times as high for art students. There is also anecdotal evidence of differences in cognitive style and perceptual talent (Cooper 2006) and Gzowski (online) who attributes the success of dyslexic hockey star, Wayne Gretsky, to his ability to distort the passage of time.

Poole (2008), researching intervention programmes, concluded that success is due to *“the efficient processing of an orientating brain”* (2008:140) and that perceiving dyslexia as other than a deficit would be important when developing support strategies. Her work may help understand why Davis’ theories resonate with people with an atypical thinking style (Vittles 2009, Jantzen 2004, de Lys 2013) and Shaw who, after completing a Davis Dyslexia Correction programme, blogged (2012) *“With dyslexia comes the gift of seeing and experiencing what I see in a multidimensional way”* and described learning to understand *“my ability to see, hear, feel and sense what I am imagining as though it were real. It also allows me the ability to shift my focus or perception in order to create mental images, make recognitions and resolve confusions.”*

There is quantifiable evidence gathered by Davis practitioners (Sole 2002, Marshall et al 2009) to show that Davis’ methods produce positive results in terms of improvement in reading skills and independent research (Engelbrecht, R.J. 2005, Feizipoor & Akhavan-Tafti 2005, van Staden et al. 2009, Ambrose & Cheong 2011) based on outcomes from case studies. However, there is little scientific evidence relating to the perceptual strengths that the Davis programme utilises.

In order to interrogate the link between dyslexia and perceptual talent, it was necessary to explore the four components of perceptual talent as defined by Davis (2004:34)

- ability to experience self-created mental images as real world phenomenon
- ability to intentionally access the brain’s perception distortion function
- ability to consciously view mental images three dimensionally
- a preference to think non-verbally with pictures of concepts and ideas versus internal dialogue

This was done by devising a research task to test the hypothesis that *participants with dyslexia have a greater sense of visual clarity, ease of movement around an imaginary object and ability to perceive it from different perspectives*, and combining these results with information collected from semi-structured interviews. The time-consuming nature of the interviews resulted in a small-scale study with just ten adult participants:

Group A: 2 males and 3 females all formally diagnosed as being dyslexic.

Group B: screened as not being dyslexic, and broadly matched to Group A in gender, age and education level

Standardised testing was used to confirm Group B participants were not dyslexic. Tests were selected to meet the characteristic features of dyslexia (Rose Review, 2009), of *“difficulties in phonological awareness, verbal memory and verbal processing speed”*.

Table 1 Tests used to screen participants who are not dyslexic

Attainments and ability	Standardised test
Reading fluency	TOWRE2

Spelling	WRAT4 Spelling
Phonological awareness	TOWRE2 Phonological Decoding Efficiency LLU+ Non-Word test
Verbal memory	TOMAL2 Digits Forwards and Backwards
Verbal processing speed	CTOPP2 Rapid Naming Digits and Numbers

Typically, when diagnosing dyslexia, participants perform poorly in the tests in Table 1. Therefore it was expected that individuals who are not dyslexic will perform well (achieve an even range of standardised scores above the median score of 100). As dyslexia occurs across a range of intellectual abilities and the Davis strategies are not based on deficit criteria, no IQ assessment was required.

Research task questions and the quantitative data

The London South Bank University Faculty of Arts and Human Sciences Check List for Ethics Review was reviewed and signed off prior to the research interviews. In addition, a discussion about the appropriateness of using the Perceptual Ability Assessment exercise was undertaken with Davis Dyslexia Association International. Davis practitioners use this exercise to explore a client's perceptual ability and determine whether visual or kinaesthetic procedures are most appropriate for a support programme.

Pre-research task questions ensured a valid selection of participants, that they understood that they could withdraw at any time and were comfortable with the terminology.

The main research task, the Perceptual Ability Assessment (PAA) exercise, was common to both groups. In this task, participants are guided to move their mind's eye (the entity in the imagination which they look 'from') around an imaginary slice of cake held on their hand. This requires them to envision the mental image from multiple vantage points outside their body.

Six questions were then asked to test whether participants with dyslexia have a greater sense of visual clarity, ease of movement around an imaginary object and ability to perceive it from different perspectives. All participants were asked to evaluate the ease or difficulty of their experience on a scale of 1 to 5, where 1 was very low or difficult and 5 was very easy or good.

The complete set of results are in **Table 2 Response to ease of performing the PAA**

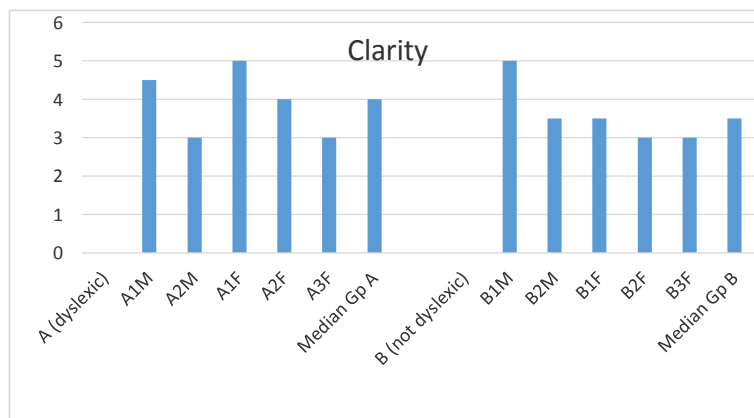
Participant	Gender	PA1 Clarity	PA2 3D	PA3 Ease of move- ment	PA4 View from different perspectives	PA5 Ability to see it across mid-line	PA6 Overall ease of exercise
Group A (dyslexic)							
A1M	M	4 or 5	4.5	Yes	5	5	5
A2M	M	4 to 2	3	Yes	2	5	2.5

A1F	F		5	Yes	5	5	5	5
A2F	F		4	Yes	4	5	5	5
A3F	F		3	Yes	4	5	5	4
Median Group			4		4	5	5	5
Group B (non-dyslexic)								
B1M	M		5	Yes	5	5	5	5
B2M	M	From 4 to less clear	3.5	Yes	4	5	5	4
B1F	F	3 or 4	3.5	Yes	2	4	4	2
B2F	F		3	Yes	2	2	1	2
B3F	F		3	Yes	4	4.5	4.5	4.5
Median Group			3.5		4	4.5	4.5	4

Question PA1 *How clear was the object when compared to a real world object?*

Figure 1
Clarity of mental image

Scores evaluating clarity ranged from 3 to 5 in both groups. One participant in each group found that the clarity reduced when they moved their mind's eye around the object.

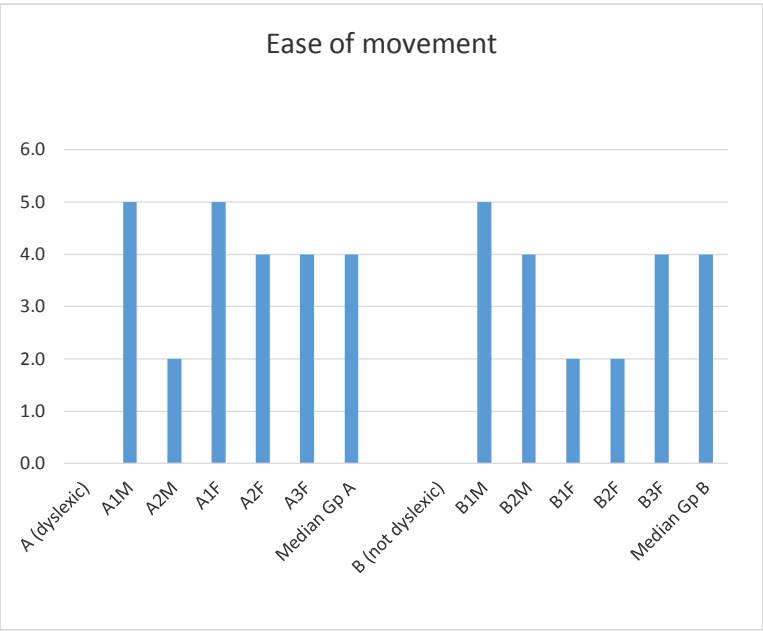


Question PA2 *Was the object in 3D?*

All participants saw the image as a three-dimensional object. They were not asked to quantify their answer but there was a difference in the certainty of the responses. A1F, speaking for Group A, said, *"I can't imagine not seeing in 3D ... the fruit is real and I can really see and feel the texture of it."* However, in Group B, two participants had mental images which were more comparable to a photograph of an object.

Question PA3 *How easy was it to move around the object?*

Figure 2 Ease of movement



Participants in Group A generally found it easy to move around the mental image but one participant found it difficult. The responses for Group B covered the same range although two of the five found it difficult.

Two participants in Group A struggled to keep the object still and move their imaginary perspective away from their real-life perspective. A3F was anchored to her initial perspective and *“couldn’t imagine moving around it because in my head it was in my hand.”* A2M

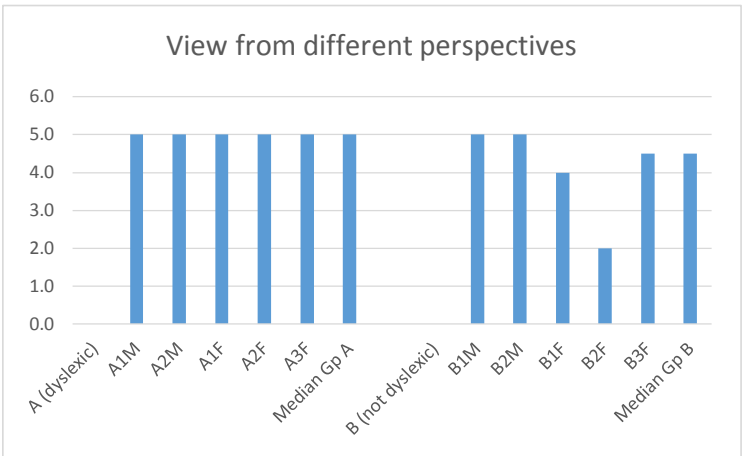
would also have preferred to visualise the object above eye level because *“if you look up there, your eyes sort of roll to the top of your head so it’s darker... and generally if you want to picture something it’s easier to move the thing than go around it.”*

Williams et al (2006) found that children with Development Coordination Disorder could use mental rotation but were impaired on whole-body tasks that required an egocentric rotation of their own bodies. These two participants in Group A also have minor motor-coordination difficulties and it is possible that their experiences were related to this.

Question PA4 *How was your ability to perceive it from different perspectives?*

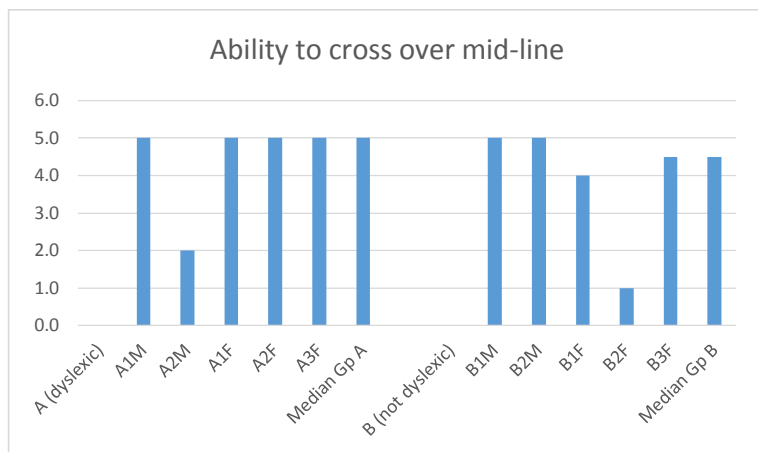
All five participants from Group A found it very easy to view the object from different perspectives despite some difficulty moving between those points. However, Group B’s responses ranged from very easy to difficult. B2F struggled with the task and *“sort of saw it the same but just zoomed in or zoomed out”*.

Figure 3 Ability to view mental-object from different perspectives



Question PA5 *How easy was it to see the object when your mind's eye crossed to the other side of your body?*

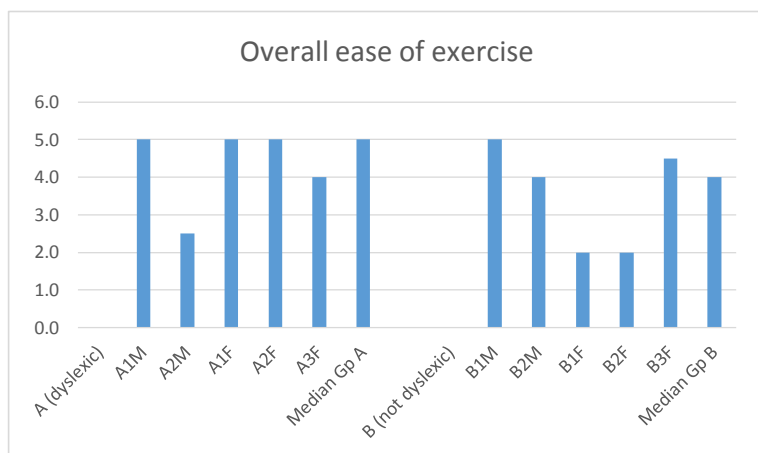
Figure 4 Ability to cross mid-line



All participants in Group A found it very easy to maintain the image when they crossed the mid-line except for A2M who “*couldn’t really see it*”. Group B participants found this aspect more difficult with one losing her mental image when she crossed the mid-line.

Question PA6 *Overall, how easy was that exercise?*

Figure 5 Responses for overall ease of exercise



Group A’s evaluation of the overall ease of the task ranged from one person who found it quite difficult (scored as 2.5) to three participants who found it very easy. Within Group B, two participants found it difficult (2) and only one found it very easy. The size of the groups are too small to draw firm conclusions but there does appear to be an small difference in the ease of performing a mental rotation task for Group A, the participants with dyslexia.

Underlying themes

The second part of the interviews had four questions:

- Do you feel that the way you think is similar to other people?
- There are two main ways of thinking. Non-verbal thought uses pictures of concepts and ideas, and verbal thought uses internal dialogue. Do you have a preference to think non-verbally or do you prefer to use verbal thought?
- Do you feel this has any advantages or disadvantages?
- Do you feel that you have perceptual talent? If yes, how do you use it?

Information was taken from across these questions to explore the themes of clarity, ease of

manipulation, ability to change perspective and preference to use non-verbal thought in more depth. One new theme of cognitive awareness emerged.

All participants did the Shipwreck Exercise (Cooper 2004). This required them to solve a problem and then, once a preference for a visual or verbal approach is identified, they are asked to try a similar task by using a different cognitive approach. Other tasks were also discussed to explore this subject further. Some participants proposed alternative tasks that they personally used, others were asked to consider their thought processes when packing for a holiday.

Visual clarity

The interviews provided additional information which suggested that the participants who were dyslexic had images that were more distinct than indicated by the slight difference in average scores. Their descriptive language was more vivid and provided a greater sense of visual clarity. This was particularly apparent in the description of the cake. Compare A3F's slice of lemon tart to B2F's carrot cake. A3F creates a clear image, *"Triangular. ... its got a biscuity base and then there's the lemon curd in the middle. It's kind of a citrusy ... lemon colour and the base goes around the outside of it and it's really zesty and it's kind of consistent in texture and kind of glimmers on the top ...because the light hits the top of it. And some of it's gone a bit brown, like half of a brown spot, where it's been sliced for the next slice"*

B2F's description is more functional, *"It's triangle shaped and sort of orangey-brown with white frosting"*.

One of the individuals who is dyslexic could recall mental images very rapidly and with great ease, *"I've seen a few friends this week so I could recap in my head the things we had done and enjoy bits and then think about other bits ...I could live a little story in my head visually"*. This ability is so natural to her that she expressed surprised at the suggestion that not everyone could recall details such as facial expressions with such clarity.

A further difference between the groups was apparent in the way that the individuals who are dyslexic visualised real-life items, selecting things that *"had some root in my own experience, so I would picture a sleeping bag that I have. And the thing from Hunger Games that I have seen, and the knife from the kitchen in my flat here"* (A3F).

Group B participants selected generic items that were not *"specific or anything – (but) based on the bare essentials and then using other experiences for what you may need"* (B3F).

In both groups, this pattern was followed by four out of five participants in each group but reversed for the fifth.

Ease of movement around an imaginary object and ability to perceive it from different perspectives

Two participants in Group A gave descriptive examples which triangulated the qualitative and quantitative data. Additional information was provided by A2M who had struggled to move his mind's eye around the static object, and from B2M who has learnt visual strategies for sport.

A2M scored his ability to move mentally around an object as low (2) but could see the different perspectives with ease (5). The instruction to keep the object static and rotate his viewpoint resulted in him making the distinction between having a clear image of the front and having to *"imagine what it looked like"* from the back. He felt that *"generally if you want to picture something it's easier to move the thing than go around it"*. He had done a Davis

Dyslexia Correction programme as a child and learnt focussing techniques which involved 'parking' his mind's eye. From this, he had developed a personal learning strategy that enables him to rotate mental images clearly "*like a CAD model*".

Only one non-dyslexic participant who described an ability to move and perceive objects with ease. B2M plays sport at collegiate level and described visualisation techniques which require agility of mental images as he "*will visualise playing against players wearing their kit and what (he is) going to do.*" This is a learnt technique, which combines with a kinaesthetic technique of repetition to ensure that moves become automatic.

Preference for non-verbal thought

Davis asserts that one characteristic of perceptual talent is a preference to think non-verbally with pictures of concepts and ideas versus internal dialogue. The individuals were given a description of the two main ways of thinking and asked whether they had a preference for one of these.

Cooper's (2004) shipwreck exercise was an important source of information to identify a preference for a visual or verbal thought. Although the strong imagery in this task creates a bias towards an initial visual problem-solving strategy, it provides a platform to discuss comparative ease of verbal and non-verbal thinking styles. Nine of the ten participants found that visual imagery was their preferred mode of thought to solve this problem. One of the participants (A2M), influenced by his training as an engineering student, used pen and paper to work out "*the trade off, and that sort of stuff is very hard to visualise*".

The second part of the shipwreck exercise required the use of the alternate mode of thought and enables the strength of their preference to be assessed. A difference emerged between the groups' abilities to use internal dialogue. In Group A, two found it impossible or 'horrible' to use only verbal thought. Another found that the images remained when trying to access only verbal, and one felt that the visual thought had been "a bit easier". The individual who had used a verbal-based strategy first had no difficulty in using only visual thought as an alternative.

However, in Group B three participants were able to use only internal dialogue. The other two found it harder and mental images were either needed or intruded.

The in-depth discussions revealed greater differences between the groups and that the choice of thinking style was task-dependent. The visual thought used in Group A was a continual stream of imagery, which contributed to the clarity of the image, whilst Group B's descriptions of visual images were more comparable to snapshots. There was less of a contrast in the style of verbal thought as participants from both groups could use streams of dialogue. The difference lay in the frequency of including dialogue and a preference either to exclude it or utilise a single word.

Within Group A, two people were strongly biased towards using visual thought. A1F described her thought process as "instantly visual" and both she and A2F described how they would visualise being in a place whilst someone was talking about it. Although A1M could access internal dialogue without difficulty, he had a clear preference to use visual thought for problem solving and explained how if he had "*to describe something, or go and do something, I'd more likely go and take a picture of it and say 'here's a picture of it' than write it down.*" However he found it difficult to visualise abstract concepts, emotions and to plan conversations, and would use a mix of visual and verbal thought for

these.

A3F was also highly visual in her thought process but simultaneously used internal dialogue to find solutions. In the shipwreck exercise, she described how she *“asked the question out of words, and then I pictured the thing. So I pictured the boat and there’s a life boat and then there’s an island offshore a bit like in Pirates of the Caribbean, and then I was thinking about the things I would take and every time I asked the question, I would picture an object. And then I would say the words and there would be a dialogue in my head about ‘would that really be an intelligent thing to do?’ And then I would picture another thing.”* This pattern of interrogation was repeated in different situations although the amount of dialogue was reduced for less complex problems.

A2M was the only one in group A with a preference to use verbal thought in some situations. He described how he would use mental imagery for complex problems but verbal dialogue to evaluate, *“like for the (university course work) I’m doing now, I’m picturing how the thing fits together ... (but) if I’m doing something when I need to write a summary or conclusion then I go to verbal ... if I understand something better it’s probably verbal. If I am looking for solutions and at that understanding phase then it’s probably pictures.”* When he used verbal thought, it was rarely a flow of dialogue as he tended to *“think in lists”*.

In Group B, only one preferred visual thought. B2M felt *“quite strongly that (he did) definitely prefer pictures”* although he would internalise verbal-lists, without images, when planning. These lists relied on memory of past experience rather than prediction of events. The other four used internal dialogue to a greater degree. B1M would *“probably talk to myself in my head”* but would use a visual strategy for planning. He also seemed to use memory and would visualise individual generic items rather than predict through a stream of imagery. B3F was clear that she would *“always find (her)self thinking in verbal dialogue”*. This dialogue was complete sentences and the flow of words would bring images with them. She found it required *“a bit more focus”* to remove the images but was able to separate the two at will when she felt the images were distracting *“if you have a mental dialogue, it kind of makes things a bit clearer.... But being able to combine the two, like instances like packing and other situations like that that, it’s really useful”*.

Both B1F and B2F also depended heavily on verbal thought and, when attempting visual thought, found words intruded. B1F described herself as *“a big list person”* and B2F found it almost impossible to think only in images as she could not find how to *“stop hearing (her)self”*.

Cognitive awareness

The additional theme of cognitive awareness emerged. All of the participants in Group A were conscious of their thought processes, frequently aware these were atypical and could evaluate them without needing lengthy consideration of the questions. They all described their thought processes in positive terms although one felt that his thoughts were *“a bit more jumbled most of the time”* particularly when transferring them into a written form.

A1F, with her detailed visual imagery, was most aware of her thought processes and saw the positive aspect of being able to *“play it all out visually”* when making plans, and the negative aspects of becoming *“preoccupied with an image”* and a source of vivid nightmares. Other positive responses ranged from indirect, descriptions of incidents, or more direct with A3F describing how she sees *“the world through a particular lens, perhaps. ...I think it’s possibly distinctive to other people in general.... I like the way that I look at the world, it’s great. I like how I see things and how I can perceive things. I think that’s cool.”*

It is possible that the process of participating in a diagnostic dyslexia assessment had raised Group A's awareness of their thinking style as this was in contrast to responses from Group B with four of the five participants echoing B1F's response, *"It's funny, I have never, ever thought about it. This idea of verbal or visual"*. Only B3F had previously considered her thinking style.

This awareness of cognitive patterns also resulted in the individuals who are dyslexic being more able to identify advantages and disadvantages of visual or verbal thought. Most advantages related to visual thought and included; being able to daydream for entertainment, clear recall of events including the recall of emotions, strong visual memory for places, a sense of being in *"contact with reality"* (A3F), being in the scene when reading, having an alternative view point, solving practical or complex problems and a strong awareness of visual details in design. The only advantage mentioned for verbal thought was that it is quicker to summarise and weigh things up.

Group B identified visual thought as being quicker and useful to develop solutions for practical problems with B1F neatly summarising that *"without pictures it's all slightly academic and conjecture."* Advantages of verbal thought were identified as better clarity, less distracting or more efficient because, as B2F explained, I *"already have words in my head to describe what I am thinking about"*.

The disadvantages of visual thought, identified by Group A, included difficulties creating images of abstract concepts, finding anticipated events did not match expectations, re-occurring thoughts and vivid nightmares. One participant in both groups also mentioned that a change of detail can have a big impact. No disadvantages were mentioned for verbal thought.

Conclusion

Ron Davis developed the Davis Dyslexia Correction programme on the premise that dyslexia was characterised by perceptual talent rather than impairment. As no research was found which looked directly at the link between perceptual talent and dyslexia, an empirical research task was developed. Despite the limitations of such a small study, some interesting difference emerged between the two groups.

The research task was based on the four perceptual abilities that Davis believes are characteristic of perceptual talent. The first characteristic is the ability to experience self-created mental images as real world phenomenon. The quantitative data for visual clarity provided insufficient evidence that the participants who are dyslexic perceived their mental images as real world phenomena. However, all five participants found it very easy to view the object from different perspectives and this, combined with the more vivid, descriptive language of specific items within the interviews, and the ability to revisit events or project into future experiences provides evidence in support of this characteristic. This finding is supported by anecdotal evidence and results in the conclusion that **the participants with dyslexia have a greater ability to experience self-created mental images as real world phenomenon.**

The second characteristic is the ability to intentionally access the brain's perception distortion function. No relevant research was identified apart from anecdotal evidence and von Karolyi's two small studies which may help to explain why Group A found it very easy to view a mental-object from different perspectives. However, the greatest difference between the two groups was found in their assessment of how easy overall the PAA had been. These factors, combined with their greater ability to day dream or recall events suggests that **the**

participants who are dyslexic have a greater ability to intentionally access the brain's perception distortion function.

The third characteristic is the ability to consciously view mental images three-dimensionally. All participants, from both groups, were able to view a mental image in 3D. It is possible, as found in anecdotal evidence and the interview discussions that the dyslexic group has a more fluent ability. However there was conflicting evidence regarding ease of movement around an imaginary object as both groups had a range of abilities. The results may have been distorted by difficulties attributed to Development Coordination Disorder as participants were not screened for this condition.

No evidence was found that participants who are dyslexic have a greater ability to consciously view mental images three dimensionally than the participants who are not dyslexic.

The fourth ability is a tendency or preference to think non-verbally with pictures of concepts and ideas versus internal dialogue. Some research identified a positive correlation between dyslexia and creativity as well as anecdotal evidence which could be interpreted in supported of this preference. However the main body of evidence came from the research interviews. A clear difference was found in the groups' abilities to use internal dialogue. All the participants who are dyslexic used visual thought with ease although one, an engineering student, preferred verbal thought as it enabled him to solve problems in a sequential manner. The other four expressed a preference for visual thought and identified a wide range of advantages which is in contrast to the single advantage identified for verbal thought as being a more efficient tool to summarise and evaluate. When asked to use the alternative mode of thought, two participants from Group A experienced great difficulty using only verbal thought and a third found that the images remained.

Although the participants who are dyslexic generally had a clear preference for visual thought, it was not perceived as being without disadvantages. This is reflected in their use of both thinking styles; either using purely visual thought or utilising words and questions to interrogate or initiate thoughts which are a fluid stream of visual images.

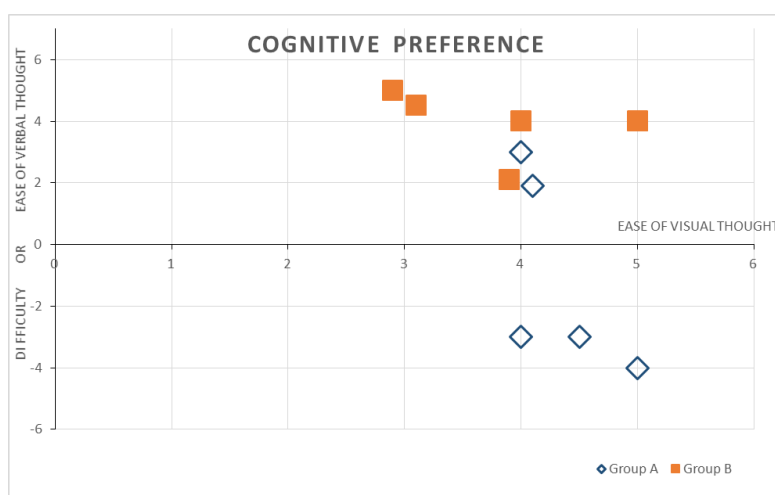


Figure 6
Relative preference of participants visual and verbal thought

Although abstract concepts can be difficult to visualise, non-verbal thought was the preferred method for complex problem solving and providing context. This fluid nature of visual thought was not always matched with verbal fluency of thought, some people used verbal thought only to provide details and others utilised single words or bullet points.

In Group B, the participants who are not dyslexic, there was stronger preference for verbal thought and a greater ability to use a stream of internal dialogue either without visuals or as a leading mode of thought. They perceived several benefits in verbal thought but recognised that visual thought had the advantage of speed and was useful for practical problems. Their visual and verbal thought was more integrated. However they were often, but not always, able to separate the two, this ability provided great flexibility and resulted in the leading thinking style being task-dependent.

A further difference was that, whilst visual thought used in Group A was a continual stream of imagery and usually incorporated real-life articles, Group B's descriptions were of generic items or snapshots.

It was clear from the responses in the interviews that the participants who are dyslexic were already conscious of their thought processes and could evaluate them with ease. This was in contrast to Group B as none of these participants had considered their cognitive style or that alternate thinking styles existed. It is possible that this difference in awareness was influenced by the diagnostic process that Group A participants would have undertaken.

The conclusion can be drawn that **the participants who are dyslexic have a tendency or preference to think non-verbally with pictures of concepts and ideas versus internal dialogue which is not mirrored by the participants without dyslexia.**

This research evidence supports Davis' assertion that there is a link between perceptual talent and dyslexia. The participants who are dyslexic, when compared to the control group, could be said to have perpetual talents as defined by the ability to experience mental images as real world phenomena, to access the brain's perception distortion function and a preference to think non-verbally with pictures of concepts and ideas versus internal dialogue. However, there was no real difference between the two groups' ability to view mental images three dimensionally.

This conclusion is also supported by data from the interviews when participants were asked if they felt that they had perceptual talent. All five of the individuals who are dyslexic answered positively, they related to the concept as defined by Davis and were able to think of ways that they used this in everyday life. The responses from the other participants were more varied and inconclusive with an awareness that these skills had been acquired through visual learning strategies and did not appear to be integrated into their daily lives.

It is important to note that these conclusions are based on a literature review and just 10 case studies therefore the findings cannot be generalised. However, they may be of interest to other Davis practitioners, other professionals supporting students who are dyslexic and of value within my own practice. Whilst cognitive strategies can be divided into two clearly different modes, visual thought and verbal thought, this research project has highlighted how they are intricately bound together. There is no clear divide but the participants who are dyslexic appeared to have a preference for visual thought and often a difficulty utilising

verbal thought, whilst the other participants were able to access both with comparative ease.

This research may also help to explain why some students respond less well to phonologically-based intervention programmes. Singleton's (2009) research into intervention programmes identified that gains were found but, in almost all cases, there were non-responders frequently accounting for over 25% of the sample. It is possible that the participants in my research task who found verbal thought counter-intuitive would also have been non-responders in phonological approaches. Two of the five participants who are dyslexic were able to use verbal thought to a limited degree but the other three participants found it very difficult or 'horrible'.

Whilst the Rose Review recommended that reading support programmes should have "a strong, systematic phonic structure" (Rose 2009:14) but the findings from this study suggest that support strategies based on holistic and visual approaches are likely to be more effective for students with dyslexia. During the research interviews, participants spoke about 'learning' cognitive strategies. Whilst it appeared easy for participants in Group B to develop visual strategies, it often seemed difficult for the individuals who are dyslexic to use verbal strategies. For students with this learning style, the Davis methods would provide an alternative support strategy which build a more natural cognitive ability. The relative ease that all the participants can use visual strategies supports the value of using non-verbal learning strategies across a wider population, not just as remedial programmes.

Group A's descriptions of their thought processes show how important a learner-centred, adaptive teaching approach is for students with dyslexia. Multi-sensory and visual-based strategies, such as those developed by Ron Davis, utilise the strong visual imagery that they frequently used for problem solving, and would help these students to absorb, remember and recall meaning. The difficulties encountered by some students with dyslexia when using internal dialogue should also be considered as this may result in a slower response to questions and difficulty note taking during lectures. Most importantly, the ability to generate fluid vivid imagery, the greater sense of clarity and the ease of accessing mental imagery supports the idea that that dyslexia could be characterised by perceptual talent rather than impairment, and this could have a positive impact on how students with dyslexia regard and embrace their difference.

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Developing a user-informed training package for a mentoring programme for people on the autism spectrum

Tara Sims, Damian Milton, Nicola Martin and Gemma Dawkins
London South Bank University.

Background

The National Audit Office's (2009) report 'Supporting People with Autism through Adulthood' highlighted the dearth of services for adults on the autism spectrum, and the negative impact this has on this group. It reported that only 12% of adults on the autism spectrum were in full-time paid employment and that 70% had additional mental health problems.

At the 2007 forum 'Successful Futures for Adults with Autism', people on the autism spectrum were asked to share their thoughts on existing models of support and how they would like support to be. The participants highlighted difficulties they experienced with navigating social life. There was a common feeling that existing models of support for adults on the autism spectrum, such as befriending, were not helpful. Many said that they would benefit from time-limited, goal-oriented, specialised mentoring. Participants identified they would benefit from support with managing practical and financial affairs; accessing education/training opportunities; securing and maintaining employment; and maintaining good physical and mental health. As a result of this, the Research Autism Mentoring Project was instigated with the aim of developing a user-informed and evidence-based mentoring service for adults on the autism spectrum.

Review of existing guidance

Much guidance that has been written for preparing and supporting people on the autism spectrum in post-compulsory education has been done so from a clinician's perspective. This guidance provides suggestions for interventions to address academic modifications, independent living and social skills, vocational goals, and mental health supports in order to improve the quality of life of such students (VanBergeijk et al. 2008, NAS, 2011). Strategies suggested in this guidance include role playing, generalising, and teaching people on the spectrum to recognise their own emotions through explicit instruction.

These strategies have been criticised by a number of autistic scholars and activists (Milton, 2012, 2014). Role playing, for example, although beneficial to some people, can cause high stress levels in others. This may be due to difficulties with generalising and the artificial nature of role play. As a result, people may over-generalise from learnt 'rules' and 'scripts', leaving them unprepared for unanticipated events. Additionally, explicit instructions regarding social phenomena that are learnt implicitly can lead to what is then perceived as 'rigidity' in autistic actions within social settings. Despite these criticisms, the guidance does suggest some more helpful strategies, including having smaller setting and class sizes and focusing on and utilising a person's strengths and interests rather than their difficulties.

Issues such as this highlight the need to understand the personal 'constructions', learning styles and perceptions of the autistic people one is working with or trying to mentor in such settings.

Review of the evidence-base

A literature search of research on mentoring for people on the autism spectrum in employment and post-compulsory education yielded very few results, highlighting the dearth of research conducted in this area. One study identified was a systematic review, conducted by Gelbar et al. (2014), of research studies describing the experience and support schemes made available for people on the autism spectrum attending College or University. Gelbar et al.'s (2014) systematic review considered twenty articles, which referred to only 69 participants in total. Furthermore, the majority of the studies were individual case study reports, demonstrating the real scarcity of research in the area. Gelbar et al. (2014) found that the majority of the studies looking into experiences of post-compulsory education included accounts of isolation and loneliness, and problematic mental health, highlighting the need for better support.

The Mentoring Project

In light of the limited evidence-base and the criticisms of existing guidance, a two-year pilot study was funded by Research Autism to establish a mentoring scheme, designed with input from people on the autism spectrum and their families and supporters. The impact of the scheme in improving the wellbeing of adults on the spectrum will be rigorously examined. The Project was granted ethical approval by London South Bank University Research Ethics Committee (approval number UREC 1469) in March 2015.

Methods

A minimum of 12 mentors will receive specialist training on mentoring someone on the autism spectrum and be matched with mentees. Mentees and mentors will collaboratively come up with goals for mentoring and the mentoring itself will take place for six months. Various measures will be used to assess its effectiveness and gain the views of mentees and mentors on their experiences of participating in the programme: the Personal Wellbeing Index (International Wellbeing Group 2013), qualitative interviews, the Salmon Line (Salmon 1995) and records from the mentoring sessions.

Understanding the well-being of adults on the autism spectrum

Current measures of wellbeing used in the context of autism have been developed with a non-autistic population and, hence, may not adequately reflect an autistic perspective. Therefore, this area of research has been gaining increasing attention. A number of studies have shown the potential of utilising Personal Construct Theory (PCT, Kelly 1955) with autistic populations however for gaining a clearer insight into the perspectives of autistic participants. Within PCT, people were initially regarded as lay 'scientists', developing theories about the world and testing them out in real life situations. Although this idea can be critiqued, as people are often not conscious of the decisions they make and the meanings they form, as Moran (2006) suggests, this way of meaning-making may be more aligned with some autistic sensibilities. By focussing on how an individual construes the world, idiosyncratic constructions are anticipated and better understood, helping practitioners to engage with the autistic people that they work with. In the current project, the Salmon Line technique (Salmon 1995), which was developed out of PCT, has been adapted for mentors and mentees to use to analyse progression towards goal achievement from the subjective viewpoint of the participants.

Developing the training

We have developed a one day training programme for potential mentors, which is delivered by a range of people from the project team and the advisory board (both people on the autism spectrum and people experienced in working with people on the spectrum. People

on the autism spectrum were involved throughout in developing, refining and delivering this training through participating in an advisory board to identify the key areas to address; attending a pilot session of the training to give feedback on the day and make changes and improvements; and delivering training sessions.

The training includes sessions on autism in an historical and social context; psychological theories of autism; the lived experience of autistic people (including sensory issues and gender identity); mentoring techniques for people on the autism spectrum (including an introduction to the use of personal construct theory); the SPELL framework (The National Autistic Society); and practical information about the project's procedures and paperwork. The training includes a mix of traditional lectures and group activities, using case studies as triggers for small group discussions to encourage problem-solving of various hypothetical scenarios.

Evaluating the training

In addition to carrying out a pilot training session with members of the advisory board, extensive feedback has been collected from participants following each of the training sessions. Feedback from the training sessions has, in the majority, been very positive. The most common criticism received was that one day is not a sufficient length of time for the breadth of information covered: participants suggested they would benefit from more time to explore all of the issues involved. An additional consideration was the difficulty in tailoring training to the individuals attending the session: some participants had much experience in the field of autism or mentoring, whilst others had not, making it difficult to meet the learning needs of all participants in a single one-day session.

The future of the project

The project has developed a specialist one-day training course for mentors of people on the autism spectrum. People on the autism spectrum have been involved in developing, refining and delivering this training. To date, more than 40 people have received this specialist training and many have gone on to join the pool of mentors for the project. Mentors have been matched to mentees and are midway through their six-month mentoring relationships. At the end of the six-month mentoring period, we will have both quantitative and qualitative data with which to evaluate the effectiveness of the programme. Concurrent to the six-month mentoring period, the training materials are being further developed and modified (by the research team and the advisory board) to create a training materials package that can be delivered in a variety of contexts and settings.

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Transition from secondary to higher education: an evaluation of a pre-entry transition programme for students on the autistic spectrum

Jonathan Vincent
York St John's

Abstract

For many individuals on the autistic spectrum making the transition from secondary into higher education can be particularly challenging and evidence shows that planning and coordinating this change effectively is extremely important for a positive experience. This paper outlines an evaluation of a pre-entry transition programme at one university in the North of England for first year undergraduate students on the autistic spectrum. By engaging with the perspectives of students, parents and practitioners it aims to uncover the value of the programme but also to understand more clearly where it might be improved. Its findings detail the practical, social and emotional outcomes of the programme for the different stakeholders and reveal the potential for informal networks of support to develop among both parents and students.

Introduction

This paper outlines an evaluation of a pre-entry transition programme at one university in the North-of England for students on the autistic spectrum. By engaging with the perspectives of students, parents and practitioners it aims to uncover the value of the programme but also to understand more clearly where it might be improved. Transition is frequently portrayed by researchers as 'a complex and often difficult period of a young student's life' (Krause and Coates 2008:499) with responses to it bounded by one's capability to navigate change (Gale and Parker, 2014) . This characterisation has been confirmed by a large number of studies from the UK that indicate that the transition into higher education can be a particularly challenging and stressful process. Notably Lowe and Cook (2003) identify the abrupt shift from a family and learning environment that is often tightly controlled to one in which students are expected to accept personal responsibility for both academic and social aspects of their lives as precipitating increased levels of anxiety and distress. Students find this process of social integration and identity formation particularly challenging in the first weeks of higher education (Hughes and Smail, 2015; Warin and Dempster, 2007) and express considerable concerns about the academic demands involved (Gourlay, 2009). It has been suggested that these experiences are particularly pronounced for students from 'diverse' backgrounds, including disabled students (Kift 2009), and a number of studies have identified that the transition from secondary to higher education can be especially challenging for students on the autistic spectrum (Mitchell and Beresford, 2014; Van Hees et al 2014; Beresford et al 2013; Cooper, 2013; Rydzewska, 2012; Chown and Beavan, 2010; Adreon and Durocher, 2007; Martin, 2006; Breakey, 2006). This has particular import given that the number of students with a diagnosis of autistic spectrum conditions disclosing on entry to UK higher education institutions has significantly increased in recent years (Equality Challenge Unit, 2013). Autism is a lifelong developmental disability, which affects how an individual communicates and relates to others, processes information, and makes 'sense of the world' (NAS, 2014). However, many individuals on the autistic spectrum experience these differences in a range of ways and to varying degrees, which accords with the concept of an autistic spectrum (Wing and Gould, 1979). Some autistic advocates such as Williams (1996), Robertson (2009), and Milton (2014) prefer a neurodiversity model as a means of describing the neurology and personhood of autistic people, to restrictive diagnostic criteria. Within this

framework autistic individuals possess a blend of cognitive strengths and difficulties across a range of core domains, including those outlined above. Van Hees et al (2014:1684) identify strengths that for autistic students include, their different way of processing information also gives rise to some exceptional skills and talents, such as a strong memory, focus precision and an eye for detail, dedication, the ability of putting one's mind to a subject, analytical skills, remarkable powers of observation etc.

According to Robertson (2009), a neurodiversity model assumes that strengths and difficulties are contextual and frequently the result of the interaction between an ableist society and individual differences or impairments. Thus, there is an impetus to understand more fully the diverse ways in which autistic students experience university, and especially transition, in order to identify aspects of practice that could be improved.

Transition to higher education for students with autistic spectrum conditions

In recent years many higher education institutions (HEI) have taken active steps to establish appropriate adjustments to support the successful transition for autistic learners (Barnhill, 2014; Mitchell and Beresford, 2014; Cooper, 2013; Pillay and Bhat, 2012; Zager and Alpern, 2010; Camarena and Sarigiani, 2009) and in the United States transition programmes for young people on the autistic spectrum have been identified as a priority for research (Interagency Autism Coordinating Committee, 2012). Evidence suggests that getting a robust support package, which includes social, emotional, practical and academic provisions in place from the beginning is important for students' success (Mitchell and Beresford, 2014; Cooper, 2013; Zager & Alpern, 2010; Madriaga and Goodley, 2010; Martin, 2006). According to Beresford et al. (2013:3), where this does not happen and there is a lack of information, planning and coordination, this can have major implications beyond the immediate. They contend, A 'poor transition' is likely to lead to reduced support and unmet needs which may have prolonged and cumulative consequences for the young people's education attainment, health and welfare.

Thus, effectively managing transitions is recognised as being crucial for autistic students' inclusion into higher education and wider society more generally.

However, given that these shifts in research and practice are relatively recent, current postsecondary transition interventions still remain sparse and their effects have yet to be empirically tested (Van Hees et al., 2014; Gelbar et al., 2014; Barnhill, 2014; Pinder-Amaker 2014; Costley et al, 2014). Barnhill's (2014) study, based on the provision of American colleges and universities, found that few institutions, only 7 out of 30 surveyed, offered pre-entry transition programmes for students on the autistic spectrum. Moreover, among her sample there was wide variation, from a 3-day orientation programme through to a 6-week intensive summer course. In the UK, there is also a paucity of empirical data available on specific pre-entry transition programmes offered by different HEIs. That notwithstanding, the small sample of studies that investigate transitions to higher education for students on the autistic spectrum identifies a number of features over two distinct stages: the planning stage and the induction stage (Martin, 2006; Cooper, 2013; Mitchell and Beresford, 2014).

Planning stage of pre-entry transition programme

Transition frequently begins many months before a student ever enters an HEI and for those on the autistic spectrum, information-gathering, decision-making and planning is extremely important (Cooper, 2013; Mitchell and Beresford, 2014). In the planning stage, transition programmes may include establishing early contact with the student and parents and planning the 'critical juncture' together (Cooper, 2013; Martin, 2006). Offering visit and taster days to the university, opportunities to meet members of teaching staff, and attending

practice classes are identified as useful, particularly where students are able to experience settings 'in action' (Mitchell and Beresford, 2014; Camarena and Sarigiani, 2009; Chown & Beavan, 2010). Much of this stage will involve making contact with the HEI's disability service, identifying specific support needs and organising adjustments.

Parents are often a vital resource at the planning stage as some students with autistic spectrum conditions find initiating conversations with strangers challenging and 'find it difficult dealing with unexpected questions in a formal verbal environment' (Hastwell et al, 2012:59). Others may struggle with organisation, working memory and initiating action (Hill, 2004; Van Hees et al 2014), which can make arranging the various meetings, completing the necessary paperwork, and liaising with the disability advisors a rather onerous task. Evidence shows that parents also fulfil an important emotional role, often acting as a sounding board, a source of advice and psychological support (Whitson & Keller, 2004; Beresford et al, 2013). However, HEI practitioners must approach parents' involvement with sensitivity, as some students may prefer to establish their package of support independently (Van Hees et al 2014; Madriaga et al, 2008).

Induction stage of pre-entry transition programme

As Barnhill's (2014) study suggests pre-entry transition programmes can vary widely; however, the induction stage tends to focus on the practical and academic issues associated with starting a new higher education course. Mitchell and Beresford (2014) suggest that expectations of increased independence, greater demands for self-directed learning, self-management of time, and less structured timetables, as well as new peer groups and social situations in post-secondary education can be challenging. This sense of being overwhelmed is reflected by a participant from Beardon and Edmonds' (2007:159) emancipatory study, 'I found it extremely hard to cope with any changes...the stress of being a student...writing essays... presentations... managing time...interacting with students and staff'. Thus, a large part of any pre-entry induction programme into higher education focuses on providing information on procedures, understanding academic conventions and gaining awareness of institutional norms (Kift, 2009; Gale and Parker, 2014). However, Van Hees et al (2014) argue that programmes for autistic students must go beyond a focus on the academic to include other aspects of the experience too.

Pre-entry transition induction programmes may also include orientation around the campus or ways of 'acclimatising' students (Van Hees et al, 2014) so that they feel confident with their surroundings and identify the places that may be more or less comfortable on sensory levels (Smith and Sharp, 2013). Some students may choose to move into their accommodation early; this may be a few days prior to the beginning of term or for extended induction periods of up to six weeks (Barnhill, 2014). Smith (2007) suggests that students on the autistic spectrum may require unique and individually based accommodation, specifically suited to the students' sensory and social needs and Lipka (2006) suggests that this is most effective when it is off-campus. Thus, having early access to accommodation before the beginning of term is identified as useful for allowing autistic students to manage the practical and emotional process of adjusting to their new surroundings without having to meet new people at the same time (Vincent et al, forthcoming). It also provides an opportunity for students to establish new routines and systems to manage independent living before the additional considerations of formal learning begins (Van Hees et al, 2014).

Methodology

This section will outline one pre-entry transition programme for students on the autistic spectrum based at a university in the North of England, before detailing the research methods utilised to gather and analyse the data.

Case study: Early Start Programme

The Early Start Programme was established in 2013 and is managed and facilitated by the University's Learning Support Team with input from academic staff and other agencies. Over the last two years, 24 undergraduate students who had disclosed a diagnosis of an autistic spectrum condition to the institution have been through the programme. Of these all were between the ages of 18-21 with 15 male and 9 female. Like many pre-entry transition programmes for students on the autistic spectrum, it can be understood as having two distinct stages: the planning stage and the induction stage. The planning stage began by establishing communication with students at the point at which they identified the institution as their preferred place of study. An invitation was then sent to the student to come for an individual visit day where they would have the opportunity to look around the facilities, individually or accompanied with parents, discuss their support needs with a disability advisor and meet with members of the academic staff from the degree programme on which they intend to study.

The induction stage began following receipt of exam results, once the students were able to confirm their place at the institution for that academic year. The students were sent an autism-friendly guidance pack on life at the university, including information about the city, campus, facilities, accommodation options, disability support and a specific autism social group. Students were invited to two days of induction, the Early Start Programme, at the university prior to Freshers' Week. This included moving into their student accommodation up to two days before other students with parents frequently accompanying them on this first day to assist with the move into their new flat or room. The programme proper began with a welcome lunch at the University; this offered students and parents the opportunity to meet one another as well as for members of the staff team to introduce themselves. During the two day programme students enrolled early, had their library induction and took a tour of the campus to identify 'quiet' areas that might be useful for studying or relaxing. Students also took part in a range of activities to support their academic and social transition, including a time management workshop, a cookery class and walking tour of the city. Students were introduced to members of the wider Student Advice Team and had opportunities to ask current students, who are also on the autistic spectrum, questions about their experience of studying and university. Finally, the Early Start Programme had staffed evening social events during the two days of induction as well throughout the Freshers' Week that followed.

Methods

As stated above, this case study considers the perspectives of students, parents and practitioners in evaluating a pre-entry transition programme for students on the autistic spectrum. It largely drew on qualitative data in the form of surveys among students and parents and one focus group among practitioners involved in delivering the programme (Punch, 2013). In doing so, it aims to understand more clearly about how the different stakeholders encountered the programme (Pring, 2000) and identify the areas that are considered most useful for meeting the students' transition needs.

Data collection and analysis

An anonymous student survey was developed by the author in 2013 and a similar postal version was developed for the parents the following year. Following Cohen et al (2007:381), who suggest that surveys among small samples should include open and "word-based" questions, both surveys had 4 main parts and sought mostly qualitative data. In order to measure whether the programme had met the needs of the students and parents, participants were given the opportunity to describe in depth their own experiences of the transition programme and to outline what was successful or where it might have been more

effective. A focus group was chosen as the method of investigating practitioner perspectives on the value of the programme. Whilst a focus group may be limited in the number of questions that it can address in the time available, Patton (2002) sees the focus group interview as a highly efficient qualitative data collection technique as those involved are able to develop ideas collectively and counter false or extreme views. The focus group for this study took place some months after the last transition programme but at the planning stage for the next one, so although practitioners were required to reflect on past events, the structure and content of the programme was at the forefront of their minds. A thematic approach (Flick, 2014) was used to analyse the qualitative data drawn from the surveys and focus group interview; this involved reading and re-reading the student and parent responses as well as the transcript from the practitioner focus group, developing codes to make sense of the data and from these identifying broad themes.

Sample

The available sample included 24 students over two years. Only those who had disclosed their diagnosis of an autistic spectrum condition to the institution were included in the sample. In 2013, a total of 11 students took part in the transition programme (7 male and 4 female) and in 2014 a total of 13 students (8 male and 5 female) participated. Of this sample, thirteen surveys were returned over the two years, 8 returned in 2013 and 5 returned in 2014. On both occasions, the surveys were distributed to the students at the end of the programme; however, as some were emotionally overwhelmed by the whole transition experience and could not attend every session, not all were available to participate. In total only 7 postal surveys were returned from parents, however these were only distributed in 2014 and not all students were accompanied by family members for the programme or involved them in the broader transition process. From among the practitioners, three were invited to participate in a focus group, including the Disability Advice Team Leader, one Disability Advisor and one Specialist Tutor responsible for academic support for autistic students; this group reflected those chiefly involved in designing and facilitating the programme and offered a significant level of insight. Thus, the sample involved in evaluating the Early Start Programme is $n=23$. It is acknowledged that one of the limitations of this sample is that it does not offer the perspectives of all the stakeholders involved and therefore may not be representative of all the students, parents or practitioners who participated.

Findings and discussion

Fundamentally, there was a strong sense that the extra support afforded by the Early Start Programme was useful for students making the transition to higher education, which aligns with previous research (Barnhill, 2014; Van Hees et al, 2014; Mitchell and Beresford, 2014; Cooper, 2013; Pillay and Bhat, 2012; Zager and Alpern, 2010; Camarena and Sarigiani, 2009). In total four main themes were identified from among the qualitative data derived from student and parent surveys and the practitioner focus group, these include the importance of practical adjustments, social and emotional effects, parental transition and networks of support.

The importance of practical adjustments

All three groups identified the value of the practical aspects of the programme. Both students and parents identified moving into accommodation early, gaining familiarity with surroundings, early enrolment, and gaining advice on coping with independent living as valuable on a practical level. For some of the students these provisions successfully took “the stress out of the whole process” and allowed them both the physical and emotional

space to make the adjustment to a new environment (Chown and Beavan, 2010; Camarena and Sarigiani, 2009). Parents specifically reported how the programme “allowed for a really positive start to university life” and “got over the issue of doing things for the first time”, referring to the emotional challenge of change for some. Moreover, they identified the value in being able to engage in many of the typical student activities (stay in their accommodation, navigate the campus, eat in the canteen etc.) in an environment where they did not need to contend with additional pressures. The three learning support practitioners identified “independent living skills”, which covers a range of aspects from “cooking, buying food, budgeting...and I think just learning to manage away from mum and dad in a new environment” as a significant area of need. Whilst accepting personal responsibility apart from the family context is recognised as being a challenge for many students entering higher education (Lowe and Cook, 2003), Mitchell and Beresford’s (2014:152) findings that suggest that the academic abilities of autistic students often mask their ability to integrate into the new setting, to develop social networks and to manage expectations of independence and self-reliance. One practitioner suggested that “it might not even be possible to separate the independent living from the study skills”; in both instances a positive transition is marked by students developing “routines that make them successful” (Boucher 2009).

Although much of the feedback from the evaluations was very positive, all three groups identified aspects of the programme that could be improved. Functional aspects were specifically recognized as requiring improvement, including more active delivery and increased opportunities to socialise. Practitioners reported the need to better align the Early Start Programme with the formal support for disabled students, in terms of a mentor or 1:1 specialist tutors, from the outset and include access to more information as “I think students have a lot of very practical questions they want answering and I don’t think we fully answered them last year”. One solution was to develop “a café idea, a bit like an open day, where [students] can go to different people and ask really specific questions, like to accommodation, to funding, to the student services team, to academic staff etc. I think that will be really useful.” A joined up approach to support such as this accords with previous transition research (Beresford et al., 2013; Mitchell and Beresford, 2014; Cooper, 2013; Zager & Alpern, 2010; Madriaga and Goodley, 2010; Martin, 2006).

Social and emotional effects

There was a strong sense among all stakeholders that the Early Start Programme was worthwhile for students on social and emotional levels. Research shows that this can frequently be an area of specific need among this population (Hastwell et al, 2012; Martin, 2008) and was thus an area that the programme specifically sought to address. Whilst students acknowledged the social benefits of meeting new people in a “relaxed and fun” environment, parents and practitioners were much more explicit in terms of the positive outcomes and reported positive shifts in students’ levels of self-confidence and sociability. Parents positively identified the benefit of meeting “like-minded friends in a relaxed atmosphere” and a broad and varied programme with evening activities, which “helped to ‘fill in’ time where otherwise students would have been on their own”. They also described how the programme specifically impacted on their son or daughter’s levels of self-confidence; one parent puts it well, My son’s reaction. He was very nervous and anxious on the Friday morning but by Saturday eve a different young man, feeling confident. These examples resonate powerfully with the neurodiversity model of autism that suggests that many of the impairments and difficulties experienced by students with ASC are contextual (Robertson, 2009; Milton, 2014) and where the environment, rather than the person, can be altered then this can have positive effects.

Parental transition

Previous research (Van Hees et al, 2014; Mitchell and Beresford, 2014) shows that parental involvement is a significant factor in the success of induction programmes and this was the case for the Early Start Programme. Although not all students chose to involve their parents in the process, those that did tended to have a high level of input throughout the planning stage of the process and were considered a vital resource by practitioners. Frequently they were responsible for liaising with the University and offering emotional support to the students throughout the process, which is also affirmed in other studies (Mitchell and Beresford, 2014; Whitson & Keller, 2004). However, this study identified that many of the parents themselves found the process of their son or daughter's transition emotionally challenging (Newsome, 2000). One practitioner noted, I think quite often with the parents, it's a massive transition for them because they are letting go of the person they have kind of been looking after for the last eighteen or maybe even more years...and so if we are able to give them some confidence then that feeds back to the students.

A clear relationship is identified between how the parents feel about the transition process and its impact on the students; where parents feel reassured that their son or daughter will be well-supported this seems to enhance the experience of transition. The approachability of the practitioners facilitating the programme was identified as a significant reassuring factor, for example, parents reported "knowing that help is available and meeting the staff who can provide it" and having the "chance to chat to staff" as important. Moreover, parents valued how "as a team you really 'get' Asperger's from the point of view of both student and parent", indicating the importance of understanding the specific needs of the students and the parents during this transitional stage. Many parents also reported feeling relieved that they could see their son or daughter engaging in activities, growing in confidence and feeling happy as the statements above suggest.

Networks of support

Practitioners reported that one of the strengths of the Early Start Programme was that it created networks of support; these were formal and informal and supported both the students and their parents. The value of formal support networks for some students was in terms of getting them "linked in" with a disability advisor, 1:1 tutor support, or a mentor was highlighted. To exemplify this, one practitioner offers the example, We've had two [students] that I can think of that before they came in we were really, really concerned that they would possibly not be able to cope whatsoever but they are coping really well, very well. I think that has to be down to the amount of that was put in at the beginning and the ongoing support. However, some of the support is also informal and is characterised by students "looking out for each other". It was acknowledged that these supportive relationships and friendships frequently occurred organically "without our intervention" and in the "in-between" moments of the programme but were nonetheless clear signs of its impact. I think you can see how successful [the Early Start Programme] has been just from the friendship networks that developed that we can actually see and when you meet up with a particular student they will often refer to another student and there is that – I mean – sense of really caring about each other, for example they might tell you that they are a bit worried about so and so and it's kind of nice to see that.

Interestingly, just as many of the parents appeared to exhibit their own transition needs, there was also evidence that informal networks of support were important for them too, as one practitioner observed, I had a chat with the parents on their own and the best thing really was afterwards when I came out, I noticed they were sitting there chatting and supporting each other and I think if they feel supported and are talking to each other then they feel more confident and that will go on to the youngsters as well...that was unexpected but another moment.

In this sense this group support each other through the process of their own transition from parents of a dependent child to parents of an increasingly independent young adult. The formation of informal networks of support among the parents and students respectively was one of the unexpected but very positive outcomes of the programme. For both groups, the shared experience established at the Early Start Programme, enabled them to engage on personal levels in expressing challenges and identifying needs. Where practitioners only observed this taking place during the two-day programme among the parents, they reported that for students this informal support network was still significant for some well into the first year of study.

Conclusions

In conclusion, care must be taken when identifying wider implications due to the limited scale and localised context of this study, moreover, it must be acknowledged that the data was broadly derived from 'satisfied' respondents and consequently does not include the voices of *all* the students and parents. In the future, it would be illuminative to seek to include the perspectives of a wider range of students, parents and practitioners, including those for whom the transition to higher education was not successful in order to extend the findings outlined here.

However, the available data from this evaluation does demonstrate that the Early Start Programme at this one university in the North of England was positively received and offered significant benefits to students on the autistic spectrum and their parents. The range of practical adjustments put in place for students, including early access to accommodation; campus familiarisation; early enrolment; and workshops and activities on independent living and academic skills were all considered useful. Opportunities to develop social relationships and networks of support were also identified as being positive, both for students and their parents. Furthermore, the emotional reassurance that was offered through a programme staffed by practitioners who clearly understand the strengths and needs of individuals on the autistic spectrum was acknowledged as valuable. However, whilst this study signals significant benefits, there remains a clear demand for more robust evidence in order to determine what is most effective in terms of pre-entry transition programmes to university for students on the autistic spectrum.

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Transition to University for Young Adults on the Autism Spectrum

Tara Sims

simst@lsbu.ac.uk

London South Bank University

Abstract

Transition to university can be a challenging time for young people on the autism spectrum. This article examines research pertaining to the transition to university for people on the autism spectrum and uses the findings from this research to formulate evidence-based recommendations for effective transitions. This is achieved through reviewing relevant research on the university experiences of young people on the autism spectrum and conducting a systematic literature review of research on the transition to higher education for people on the autism spectrum. The article ends with recommendations for improving transition experiences, drawing on the findings from the research studies reviewed.

Introduction

For people on the autism spectrum, transitions can present both challenges and opportunities (National Autistic Society, NAS, 2013). The transition to university is one taken by fewer than 25% of young people on the autism spectrum (Department for Education 2014). This may be in part due to difficulties with managing daily practicalities and coping with a new social and sensory environment that does not support differences in social communication and interaction; and repetitive interests and behaviours (DSM-5 2013).

University experiences of young people the autism spectrum

Improving access to education for young people is vital as The National Audit Office (NAO, 2009) identifies this as a key factor in improving the lives of adults on the autism spectrum, identifying that a lack of appropriate support for young adults may result in them not achieving their potential by leaving university without completing their course. The number of students who identify as being on the autism spectrum is increasing rapidly. It has also been suggested that the amount of people at university with an autism spectrum condition might be higher than reported as those people who go to university are among the most 'high-functioning' on the autism spectrum and are therefore most likely to reach university without having received a correct diagnosis (Hastwell et al 2013).

There are three major UK studies which have furthered our understanding of the university experiences of young people on the autism spectrum by directly involving them in research: Beardon and Edmonds (2007), Madriaga et al (2008), and Hastwell et al (2013).

Beardon and Edmonds (2007) conducted a study between 2006 and 2007 of the local authority provision of services for 238 students on the autism spectrum. A mixed methods questionnaire was developed in order to enable adults on the autism spectrum to express their views on the challenges faced by students on the autism spectrum and identify how services could be improved. The data was categorised into four overarching themes relating to difficulties encountered at university: social interaction; course/curriculum structure; the social environment of the university; and understanding of autism. Difficulties identified with social interaction were concerned with the necessity of communicating with others (in, for example, group work). It was suggested that support to understand non-autistic people's behaviour may benefit people on the autism spectrum, whilst support to understand autism may help non-autistic individuals. In terms of the environment, participants identified

difficulties with expectations, activities and sensory experiences. Again, education of the autistic individual about non-autistic behaviours and, vice versa, was identified as a way of minimising the impact of this. Some participants reported that they faced challenges arising from their own and others' understanding of autism. Factors related to the course and curriculum structure, such as rigidity in assessment modes/criteria and bureaucratic requirements, were found to present challenges to some of the participants. Suggested approaches to minimising the stress caused by these challenges were clear communication and mentoring.

Madriaga et al (2008) interviewed eight students with Asperger Syndrome (AS) multiple times during their first year of university. The project aimed to identify barriers and facilitators to positive university experiences through recognising the students themselves as central to the experience. The study found that students initially viewed starting university as a positive experience, viewing attending university as an opportunity to move on from past negative experiences (supporting the view that transition can present both challenges and opportunities). Some of the participants reported experiencing social isolation, whereas others did not report difficulties in social interaction. Participation in social situations, such as attending fresher's fairs and living in shared accommodation, were not found to remedy social isolation due to the high levels of stress they could produce. Facilitators identified by participants included having effective mentoring and teaching staff being adaptable to different learning styles.

Hastwell et al (2013) carried out a study at the University of Cambridge from 2009-2012 (over three academic years) examining university experiences for 28 students who identified with the autism spectrum. Students shared their views in a range of ways, through focus groups, interviews and questionnaires. They were asked to reflect on their experience of university and identify factors they felt would positively influence their academic success and university experience. The study identified four main factors that influenced student experience: social interaction, the university environment, understanding of autism and academic engagement. With regard to social interaction, 35% of the 28 students reported that they found social situations very stressful, citing large groups of people as *"intimidating"* and unanticipated formal verbal questions being difficult to deal with, resulting in lectures being missed. Students from the study suggested that a social group may have helped with this, to help develop a healthy balance between study and social time. In terms of the university environment, 73% of the participants identified that the university environment can be challenging due to difficulties with sensory overload and a lack of structure/predictability. One particular difficulty identified was living in shared accommodation, which could be very noisy, making studying difficult and very stressful. Many of the participants identified that a lack of understanding and empathy caused difficulties at university, with others making assumptions and underestimating their abilities. Students suggested that people need to have more awareness that communication and empathy require the participation of two parties and are not the sole responsibility of the person on the autism spectrum. With regard to academic engagement, participants highlighted difficulties with changes (between levels of academic study, teaching styles/philosophies and assessment methods). One participant reported that the desire to understand each topic of study so completely impacted their ability to manage their workload. It was suggested that a knowledgeable mentor, who provides information clearly and gives encouragement, could help with this.

The researchers developed an acronym to encompass principles of good practice for positive university transitions for people on the autism spectrum – REAL (reliable, empathic,

anticipatory, logical). It is suggested that these factors are central to good practice as *reliability* reduces stress caused by unpredictable change, *empathising* enables staff to understand student concerns, *anticipating* (what may cause stress) enables changes to be made in advance, and being *logical* enables students to understand expectations.

In common throughout these studies (Beardon and Edmonds 2007; Madriaga et al 2008; Hastwell et al 2013) is the finding that difficulties encountered at university are concerned with the social environment, the institutional environment, academic expectations and people's understanding of autism. The move to university can, therefore, be a challenging transition. However, it may also be viewed as a 'fresh start': an opportunity to leave negative past experiences behind (Madriaga et al 2008).

Systematic literature review of university transitions for people on the autism spectrum

To further explore transition planning for young people on the autism spectrum, a review of recent literature was undertaken. A range of databases was included in the search (specifically AMED, the British Education Index, Child Development and Adolescent Studies, CINAHL, Education Abstracts, Education Research Complete, PsychArticles, PsychInfo, and SocINDEX) using the EBSCO search site. The following criteria were applied to the search:

- Research studies from the UK only (due to differences in educational systems in different countries);
- Articles published within the last 10 years (2005-2015) to ensure currency of evidence;
- English language documents only to avoid mistakes being made in the translation of documents.

The search terms used were autism (and alternatives), transition (and alternatives) and university (and alternatives). A Boolean search was performed using 'wildcards' to ensure alternative spellings and plurals were not unnecessarily excluded.

The search yielded six results which, after scrutiny of the abstracts of these articles, provided two relevant research studies.

The two relevant articles identified both originated from the Madriaga et al (2008) study discussed in the previous section. Madriaga and Goodley (2010) examined longitudinal data from the life histories of eight students on the autism spectrum at UK universities to identify barriers to participation in academic work. They found that barriers were encountered in lectures (such as not providing hand-outs prior to the lecture and not encouraging participation of students), group work (due to social anxieties, for example), and assessment (due to access to additional support requiring forced disclosure and segregation). Madriaga and Goodley (2010) concluded that the barriers identified result from unsuitable social, physical and institutional environments and not 'deficits' or 'impairments'.

Madriaga (2010) re-analysed the data from the above study to focus on the spaces at university that may be difficult for students on the autism spectrum to access. It was identified that fresher's fair (and week), the student pub, the library and student accommodation can all be environments that are difficult to access. Access to university facilities was found to be made difficult by the social and sensory environment of these places. These two studies provide additional relevant information about the environmental barriers that may be encountered by students on the autism spectrum. Furthermore, the 'voice' of students on the autism spectrum is central to the findings.

Recommendations for successful transition:

Reviewing the evidence collated has led to the following recommendations for services that should be made available (but not assumed necessary) for a young person on the autism spectrum attending university away from the family home:

- **Clear and timely information**

It is important that links with support services are developed as early as possible prior to the start of the university course (Hastwell et al 2013). Having an identified support person at the university enables the student to ask questions/raise concerns and ensures that they are made aware of the services available to them (Hastwell et al 2013). Support available should be flexible so that a range of needs and preferences can be met (MacLeod 2010). Following the principles of REAL (Hastwell et al 2013), institutions should provide clear information in prospectuses/on websites about how to disclose disabilities and access support services (prior to enrolling at the university).

- **Staff who have knowledge and understanding of autism**

Specialist training on supporting students on the autism spectrum should be mandatory for all teaching and support staff at the university (Hastwell et al 2013). Different levels of training can be provided depending on staff role but ALL staff should receive some level of training. This fosters an environment of inclusivity, rather than segregation and difference (Madriaga 2010).

- **Pre-entry orientation events**

University taster days can provide prospective students with information about courses and services and provide tours of key places, such as the library, accommodation, teaching facilities and the student's union prior to the other students arriving (Hastwell et al 2013). This may enable students to become familiar with the environment when sensory input is at a more manageable level, and reduce the stress that may be caused by unanticipated change. Gardner et al (2012) suggest gathering information about attendees (such as their interests, plans for the future and any questions they have) prior to organising the event so that it can be tailored to the requirements of those attending. At a taster day developed by Gardner et al (2012) the following topics were included: meeting people, getting involved in groups and societies, accessing support and managing coursework. Gardner et al (2012) also provided prospective students with tours of university accommodation and the university cafeteria. Gardner et al (2012) found that the pre-entry orientation event helped prospective students to feel "*safer and more prepared*" (p.264) for starting at university.

- **A social group for students on the autism spectrum**

Young people on the autism spectrum may encounter social challenges at university, compounded by the expectations placed on them to manage a varied workload, develop independent living skills and take initiative for their own learning (Beresford et al 2013). Students on the autism spectrum may also have experienced social exclusion and bullying, increasing their anxiety about entering new social groups (Beardon and Edmonds 2007). Within higher education, contact with peers is not only important for pastoral and support reasons, but provides an educational function through clarifying expectations of assessments and catching up on missed lessons (MacLeod 2010). A social group for students on the autism spectrum was put in place at Cambridge University following student feedback that this would facilitate receiving a more holistic university experience that is not purely focused on academic study (Hastwell et al 2013). MacLeod (2010) suggests that some individuals on the autism spectrum may prefer online communication to direct social contact. It would, therefore, be beneficial to also have a virtual social group available to students on the autism spectrum. Indeed, participants in MacLeod's (2010) pilot study of an

online peer support network reported that online peers were a highly valued source of support from whom participants would proactively seek help and guidance.

- **Specialist mentoring**

Mentoring refers to a time-limited goal-orientated relationship that supports both personal and vocational learning and development, in which an experienced person provides guidance and support to another less experienced person as directed by the mentee's goals (Mentoring and Befriending Foundation 2014). A mentor at university could help a student on the autism spectrum with the transition to (and throughout) university life. It is important that a mentor approaches issues from the viewpoint of the individual experiencing them, helping the person to navigate a sometimes challenging social/physical/cultural environment, rather than trying to change that person to fit in to a non-inclusive environment. This is exemplified in this quote from Beardon and Edmonds' (2007) study:

"People need to get over the idea that the 'neuro typical way is the right way and any other way is wrong [...] People with AS don't need to be cured, or trained how to be 'normal'. It's the 'normal' people who [...] need to be taught not to be prejudiced and discriminatory, and to accept and accommodate us for who we are" (p.6).

- **Accessible services (such as fresher's fair and library)**

Madriaga's (2010) study highlighted that there are particular spaces within universities that may be difficult to access for students on the autism spectrum. Barriers to access may be reduced by providing tours of these spaces prior to the start of the university term (see "Pre-entry orientation events" above). For particular events, such as fresher's fair, instating a 'quiet hour' at some point during the fair and/or providing a buddy with whom students can attend the fair may help (Beardon et al 2009; Hastwell 2013). Additionally, creating an online fresher's fair may enable more students to 'attend' virtually and join the societies in which they have an interest.

Conclusion

First person accounts of university experiences of adults on the autism spectrum suggest that difficulties encountered at university are largely concerned with the inflexibility and non-inclusive nature of the environment (Beardon and Edmonds 2007; Madriaga et al 2008; Madriaga 2010; Madriaga and Goodley 2010; Hastwell et al 2013). Services should be put in place to facilitate a smooth transition to university, taking account of the challenges posed by the social environment (meeting new people on a social and academic level), the institutional environment (understanding structures and expectations), the academic environment (managing workloads) and the physical environment (the sensory challenges posed by places such as libraries, fresher's fairs and shared accommodation). Whilst support should be made available to manage these challenges, it should be recognised that some students may choose not to access any or all of the support services. Additionally, a flexible approach should be taken (such as offering services both face-face and online) to cater for a range of preferences.

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Workshopping transformation: Introducing the concepts of UDL into a BSc Nursing course.

Martyn. K.J &Gibberd D.
University of Brighton

Introduction

Nurse education in the UK attracts a wide range of applicants from diverse educational, social and personal backgrounds. In line with equality legislation (Equality Act 2010), guidance from the professional regulatory body, Nursing Midwifery Council, (NMC2010) and the aspirations of NHS workforce planning (DH 2012), attracting diverse applicants supports the need for a nursing workforce that is representative of the communities it serves. This paper will explore how in one University, the academic school set out to introduce the concepts of Universal Design for Learning (UDL) through the process of periodic review, to develop an inclusive curriculum to support its diverse student population. In doing so, this paper will explore the barriers to changing 'traditional' pedagogical practices. Finally the authors' will reflect on the experience and how through engagement with this process, ideas, and recommendations for the future curriculum developments will be identified.

Background

Nurse degrees leading to professional registration with the Nursing and Midwifery Council (NMC) are commonly three years in length with fifty percent of the time being spent in clinical settings. Nursing has had a long history of having a 'wide entry gate' enabling many people from varied backgrounds the opportunity to study and become registered nurses (NMC 2010). The current profile of nursing students in the UK indicates that while many will access higher education institutions (HEI) with traditional educational profile encompassing 'A levels' others will access through alternative routes including Access to Higher Education courses situated within Further Education (UCAS 2014). Students may also disclose a disability either during the application process or the course. While dyslexia is the most common disability disclosed a significant number of students will have long-term physical or mental health conditions, sensory or motor difficulties. Moreover within this diverse group while many nursing students are under the age of 25 others will be mature students or students who traditionally would not have considered higher education as an option, but are now accessing HEI to complete nursing courses. For some students, the choice, of course, was primarily based on the vocational nature of nursing as a profession, and they are already daunted by the academic requirements of higher education. In addition, up to 17% of nursing students will disclose having a mental illness, sensory or physical impairments (UB 201, UCAS 2014). Students who have disabilities are not restricted from becoming nurses as long as the individual is able to meet the professional regulatory requirements for registration on completion of a recognized program of study (NMC2010).

Supporting students who have a disability.

Historically students who have a disability are supported through 'reasonable adjustments' to existing programs of study. These can include modifications to the course or additional human or technological support provided by the HEI. Although some of this support is funded through central HEI budgets, where additional support is required this is funded through the disabled students allowance (DSA). However, recent government reforms and restrictions on the amount of support funded by the DSA has enhanced the need for HEI's to be anticipatory in providing a greater package of support for students who have additional learning needs. While currently this constraint on funding applies to funding from Student Finance England (Wales, Scotland or Northern Ireland), it is anticipated that this will

inevitably influence the DSA funding through the NHS Business Services Authority (NHSBSA) bursary scheme, that fund the majority of nursing students. Addressing these issues and lessening the need for reasonable adjustments to existing programs can be achieved by viewing a curriculum through a UDL lens. UDL was originally developed to support pupils in compulsory education, but its relevance to higher education and the workplace is increasingly being explored as a means of lessening the need for reasonable adjustments (Figure 1). The concept of UDL in education considers three elements; multiple means of representation, multiple means of action and expression, and multiple means of engagement (CAST 2011). (Figure 2) This curriculum model enables educators to embed flexibility as they move away from traditional lectures to other means of course delivery including 'flipped classrooms', video, podcasts and simulations (Prober & Heath 2012) enabling learners to access materials through multiple means. Simultaneously the taught component is assessed by a variety of strategies that focus on optimizing the challenge to the learner by setting clear expectations and goals, supported through the student's development of coping skills, self-assessment, and reflection. UDL also supports the incorporation of accessibility tools and assistive technologies through platforms such as 'virtual learning environments' and mobile device applications (Dinmore and Stokes 2014, CAST 2011).

Setting the scene

The formal periodic review process forms part of the three or five yearly formal quality assurance program reviews within most HEI's. Although educationalists believe that curricula associated pedagogical processes are dynamic, course delivery can, in general, remain unchanged between periods of course review. Teaching academics are often focussed on the day to day requirement of delivering validated courses under the pressure of meeting the needs of students, the organization, and the professional regulatory body (van de Mortel & Bird 2010). As such finding an opportunity to engage in curriculum debate or make significant changes to curriculum delivery are limited. Bird et al. (2015) had argued, that in the spaces between formal reviews, teaching academics often worked in individual private domains and that the risk to the curriculum was that there would be no vision of a 'whole' curriculum as experienced by learners. This was supported by student feedback, through the National Student Survey (NSS 2015), that had revealed dissatisfaction with the course structure and a perceived difference in the expectations of the students, the clinical mentors, and the academic staff.

In addressing these concerns, the formal periodic review was framed as a shared, formative, collaborative and developmental process (Briggs 2007., Marlowe et al., 2012). The periodic review created an opportunity to appraise critically the educational philosophy and pedagogical processes being used, and to question 'how inclusive is the curriculum' and 'is it meeting the needs of our students, our professional regulatory body and our local commissioners of nurse education.'

Introducing the concepts of UDL

The course team was enthusiastic about improving the course delivery and drawing on the good practice of colleagues within the School. Also, the university had also signaled a drive towards inclusive design through the appointment of an Inclusive Practices Manager. This shift towards inclusion was also aimed at improving the student learning experience. Over a period of nine weeks, lecturers from the university's center for teaching and learning (CLT) and the Inclusive Practices Manager introduced the concepts of UDL to the educational team, and they were tasked with reviewing their modules and course delivery through an inclusivity lens. This was supported by Information related to UDL available through the

review web-based portal. Also, the Disability Liaison Tutor based within the school had meetings with individual module teams and course teams to explore how inclusion can be supported within a modular degree program that includes clinical practice experiences.

Discussion

The course team had already recognized that a significant number of students received additional learning support and that some students had left the program of study citing amongst other things difficulties with studying at university. Also, anecdotal evidence indicated that many students struggled with courses having multiple attempts before being withdrawn through university processes. In exploring these issues, the teaching academics explored how accessible the taught component was to the students. Anecdotally they identified that some students struggled with accessing learning materials and did not appear to be well prepared for studying in an HEI setting.

During the review process although the teaching academics were interested in developing inclusive practices they voiced concerns that changing to alternative modes of content delivery was a risky strategy that required additional resources and an improved IT infrastructure to be successful. Similar concerns were raised when discussing alternative assessment strategies with teaching academics reliant on maintaining academic and professional standards through familiar and tested modes of examination. Walder (2015) argued that these factors contribute to pedagogical innovation being held back. This was evident within the course reviewed as although alternative modes of course delivery and assessment strategies were identified there was a predominant reliance on lectures produced using a powerpoint format, and formal assessment through standard examination formats, essay based assignments and objective structured clinical examination (OSCE) for practice elements.

Reflections and Conclusion

What emerged from engaging with a group of nurse teaching academics during the periodic review process was that despite the collaborative culture there was a resistance to change at a time when they felt pressurized to deliver a course that met the needs of their stakeholders. As such they valued the 'tried and tested' pedagogical processes as these were familiar to their students and were not onerous to provide. Uncertainty about how students would respond to alternative ways of presenting learning materials, the perceived lack of resources or infrastructure to support change, and a feeling that alternative assessment strategies are risking academic and professional standards limited the changes they felt able to make. However, despite the limited success in embedding the concepts of UDL within the curriculum, it did instigate school-wide discussions and an interest in exploring new ways of working for the future. While UDL may not be fully embedded within the course, the seeds have been planted and alongside the continued support of the University further development of inclusive practices are being considered for the future. Introducing inclusive practices into a curriculum and ensuring changes are sustained over time requires time. The identification of 'champions' to introduce new ways of working can help but in the absence of case studies that relate UDL to nursing and nurse education and the infrastructure to resource changes, nurse teaching academics remained resistant to change.

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Inclusive Practice in a nutshell

The more inclusively the curriculum and assessment is designed, the fewer individual adjustments are required, and the more students that benefit from its accessibility

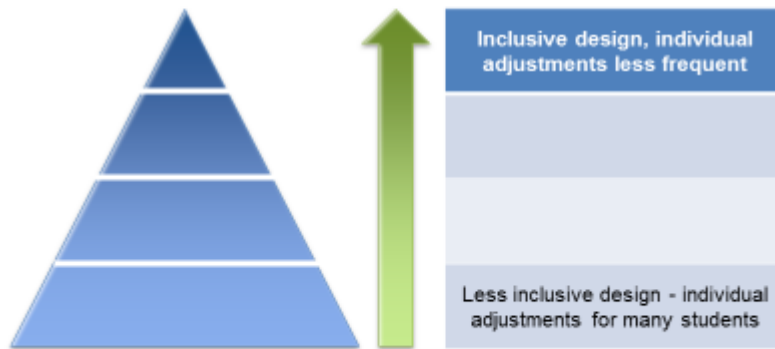


Figure 1. Inclusive practice in a nutshell. Taken from Gibberd D presentation September 2015 Inclusive Practices University of Brighton. School of Health Sciences.

Figure 2 Representation. This means using a variety of methods to present content - such as lectures and videos, texts, web resources

Expression. This is allowing your students to show their knowledge in a variety of ways – through tests, assignments, discussion boards, presentations or group work projects, etc.

Engagement. This means using a variety of teaching methods in one's class - such as case methods, debates, discussions, reflections or class activities and demonstrations.

Principles of UDL adapted from CAST 2011

Examining the need for, and establishing the efficacy of, the language modification of exam papers for university students on the autism spectrum.

Harriet Cannon
University of Leeds
h.a.cannon@adm.leeds.ac.uk

Abstract

This project was undertaken in order to establish the need for, and examine the efficacy of the language modification of examination papers for university students on the autism spectrum. A literature review examines and presents the theoretical basis for language modification, seeking specifically to relate the key characteristics of autism to the examination experience. A small-scale quantitative and qualitative research study identifies themes around the comprehension of examination language, and draws out the experience of students on the autism spectrum sitting both modified and unmodified examination papers within Higher Education. The findings suggest that language modification is both necessary and effective in mitigating the effect of ambiguous examination language, and in turn reducing one aspect of examination anxiety. The paper sets out a number of recommendations in relation to inclusive examination paper design, and opens the door to further study in relation to language modification and attainment.

Introduction

The aim of this project is to establish the need for, and examine the efficacy of the language modification of examination papers for university students on the autism spectrum. Language modification (LM) is the process of adapting the language and structure of examination papers to ensure they are accessible to someone who is likely to process written language differently (Janan and Wray, 2011). The language used in Higher Education (HE) is often stylised and esoteric (Billig, 2013; Sword, 2012); LM mitigates this by ensuring examination papers are presented in plain English, with clear, concise instructions. LM has become an increasingly common recommendation for students on the autism spectrum over the last five years, as this cohort continues to increase (HESA, 2012). However, little research has been conducted into whether it is necessary, or effective in ensuring examination papers are accessible.

This study involved eighty-eight students with a diagnosis of Asperger Syndrome (AS) at a high-ranking university (University A). AS is traditionally characterised by the 'triad of impairments' noted by Wing and Gould (1979) and Wing (1986, 1991) which describes impairment in the key areas of social interaction, communication and flexibility of thought. Although there may be evidence of co-occurring Specific Learning Difficulties, such as dyslexia, this cohort of students does not exhibit the learning disabilities (IQ of less than 70) which more frequently accompany classical autism (Fombonne, Quirke and Hagan, 2011; Emerson and Baines, 2010), and are assumed to be of at least average, and often above average intelligence (Bogdashina, 2006; Attwood, 2000; Wing, 1992).

This study will provide an overview of the relevant literature around language processing differences in people who have AS, as well as exploring the effect the examination setting can have on processing ability in order to present a case for LM. It will also describe the methodology used and discuss the findings of the research undertaken, and reflect on the opportunities and limitations presented by the study.

Literature Review

Much of the literature relating to language processing in autism focusses on verbal and non-verbal communication and language skills in general. Literature relating specifically to written communication and the comprehension of written language is sparse in comparison, particularly with regard to reading comprehension amongst young adults on the autism spectrum.

Huemer and Mann (2010) describe a “successful reader” as someone who “has the ability to accurately and fluently decode words so as to comprehend their meaning in isolation and in context” (p.485). However, in autism, there is an apparent disconnect between language structure and comprehension. Joliffe and Baron-Cohen (1999) discuss how phonology, semantics and syntax appear intact in people on the autism spectrum, but difficulty in appreciating meaning remains. They cite Prior and Hall (1979) as demonstrating that people on the autism spectrum “are impaired in their comprehension of phrases, but not in their comprehension of single words” (p.150). Developing this observation further, Martin and McDonald (2003) discuss pragmatic language differences, stating that, whilst knowledge of the structure of language is generally intact, the ability to engage it pragmatically is affected, and this may inhibit comprehension. Pragmatic language is described as the transmission of meaning beyond the structural, semantic elements of the text, involving context, pre-existing knowledge and inferred intent (Morris, 1938).

Myles, Hilgenfeld, Barnhill, Griswold, Hagiwara and Simpson (2002) built on work carried out by Church, Alisanski and Amanullah (2000) by analysing the reading skills of individuals with AS Asperger Syndrome, conducting a small-scale study of sixteen individuals which looked at specific elements of reading at different levels of primary and secondary education. The authors identified that whilst individuals with AS were on a par with their peers in the areas of guided reading and response to auditory clues, they were at a significantly lower comparative level in the areas of Silent Reading and Independent Reading, demonstrating marked differences in literal, factual and inferential comprehension. This peculiarity is also noted in several other studies, which have demonstrated that although decoding skills appear intact (O'Connor and Klein, 2004; Myles et al., 2002; Frith and Snowling, 1983), reading comprehension is at a level lower than expected for the cohort's ability (Minshew, Goldstein, Taylor and Siegel, 1994; O'Connor and Hermelin, 1994). Nation, Clarke, Wright and Williams (2006) established that children on the autism spectrum appear to be less accurate in their reading, affecting overall comprehension and reading confidence. In addition to decoding differences, Baron-Cohen (1997), Happé and Frith (1996; 1994), Ghaziuddin and Gerstein (1996), Kerbeshian, Burd and Fisher, (1990), Kanner (1948), all cite overly literal language use as a feature of the autism spectrum which further affects comprehension.

Some studies have sought to link differences in comprehension with the key features of autism, such as Central Coherence Theory (Happé, 1994; Frith, 1989) and Theory of Mind (ToM) (Baron-Cohen, Leslie and Frith, 1985). Referring to the significance of both ToM and central coherence, Frith and Happé (1994) looked specifically at language communication in relation to the autism spectrum, noting the vital part that ‘mind-reading’ has to play in all forms of communication, including reading comprehension. In the examination setting, this difficulty with ‘second guessing’ what is required or expected can be problematic for

students, both in the experience of sitting the examination, and in their ability to demonstrate their knowledge (Beardon and Edmonds, 2007).

Martin and McDonald (2004) discuss the impact that weak central coherence and social inference theory have on non-literal language use, an idea also raised by Frith (1989) who established that context derives meaning, thus rendering an individual reliant on strong central coherence in order to establish context. Wahlberg and Magliano (2004) noted that individuals with high-functioning autism appear to have particular difficulty with written text and suggested that this was due to the impact autism has on the ability to piece together contextual information in order to interpret ambiguities in the text. Huemer and Mann (2010) and Martin and McDonald (2003) note that it is these 'higher order' cognitive abilities which are most affected by autism.

It is important to note that those studies focussed on assessing reading comprehension in individuals on the autism spectrum were not performed in a high-stress environment such as the typical university examination setting. The general impact of stress on decoding and comprehension is addressed in the literature, particularly with regard to the effect of stress on working memory (WM), which is critical to the ability to retrieve and manipulate information in order to form an answer, a central element of an examination. Baddeley has written extensively on WM capacity in relation to reading comprehension, and indicated the effect stress has on WM load (Baddeley, 2000; Baddeley and Hitch, 1974). Numminen (2002) has examined the relationship between WM and reading comprehension in relation to certain disability groups, and asserts that "plain language is one of the most expedient tools that reduce the burden on the linguistic working memory" (p.3). However, controversy surrounds whether WM is affected by autism, and if it is, whether this is causal or symptomatic. Geurts, Verte, Oosterlaan, Roeyers and Sergeant (2004), Ozonoff and Strayer (2001), Ozonoff (1997), and Pennington and Ozonoff (1996) demonstrated that WM is intact in people on the autism spectrum, whilst Luna, Doll, Hegedus, Minshew and Sweeney (2007), Williams, Goldstein and Minshew (2006), Landa and Goldberg (2005) suggest that WM is affected to some extent.

Regardless of the controversy surrounding autism and WM, what is clear in the literature is that stress and anxiety have a negative effect on WM (Hayes, MacLeod and Hammond, 2008; Cassady and Johnson, 2002; Derkashan and Eysenck, 1998; Darke, 1988; Eysenck, 1985; Sorg and Whitney, 1992). It is widely accepted that people on the autism spectrum demonstrate elevated levels of anxiety in relation to the neurotypical population (White, Oswald, Ollendick and Scahill, 2009; Bellini, 2004; Tantam, 2000; Attwood, 1998). Gillott and Standen (2007) examined the causes of anxiety in adults on the spectrum and concluded that particular triggers to anxiety included anticipation, panic, sensory stimuli, enduring unpleasant events and experiencing change. Since the examination setting involves lengthy anticipation of an unpleasant event, demanding a change in normal routines, and enduring the sensory storm of an examination hall, it follows that students on the autism spectrum undertaking examinations are likely to experience levels of anxiety elevated beyond their baseline level, which may affect their WM, and therefore their reading comprehension.

Thus the impact of processing differences on reading comprehension and potential examination performance is clear. Guidance has been produced which addresses the language used in examination papers at secondary level (JCQ, 2013; Ofqual, 2010; BATOD, 2008) but none exists for HE. Additionally, there is a deep-rooted tradition of using

esoteric academic language or 'academese' in Higher Education as a whole (Billig, 2013; Sword, 2012; Graff, 2003) which has inevitably filtered down to examination papers, creating a further barrier to comprehension. Papers are often full of "abstract, convoluted, jargon-ridden sentences that befuddle readers" (Sword, 2012) and are likely to precipitate "incomprehension, anxiety and alienation" (Graff, 2003, p.4) amongst neurotypical students as well as AS students.

On the basis of the available literature, this study expects to demonstrate that there are particular issues experienced by students with AS related to reading which are likely to affect the comprehension of examination language, and which can create a negative experience of examinations. It also expects to demonstrate that language modification redresses the impact of inaccessible language use to some degree.

Methodology

Participants and inclusion criteria

Participants were chosen on the basis that they are fully registered students on a programme of study at University A and that they have disclosed, and provided evidence to confirm, that they are on the autism spectrum. Some eighty-eight students were contacted with an invitation to participate in this research project, thirty-one of whom responded indicating that they would like to be involved.

Procedure and information gathering

Potential participants were contacted once by email (Appendix 1). The email set out the nature of the project and invited students to respond if they were interested in participating. Respondents were sent a link to an online survey written using Google Forms (Appendix 2). This survey tool was chosen as it guarantees anonymity, and allows for a variety of question types. Robson's (2011) methodology was followed in the design of the survey. Question logic was used to enable certain questions to be directed at certain participants in order to distinguish between the experience of students who have language modified exam papers, and those who do not. Questions comprised a mixture of dichotomous, multiple-choice, rating scales and choice matrix questions, along with free text boxes to enable participants to record qualitative observations. Plain English was used throughout the survey, and it was tested on four colleagues before going live. Students were given ten days in which to respond to the survey. Responses were automatically logged on a password-protected Google account available only to the researcher. The researcher had planned to follow up on the survey with interviews with participants, but permission for this aspect of research was withdrawn.

Participants

Of the thirty-one students who were sent a link to the survey, twenty-seven went on to complete the survey. Of these, twenty were Undergraduates, three were Taught Postgraduates, two were in the 'Other' category (including PhD students) and two were Foundation level students. Two participants entered their student status, but did not complete the rest of the survey, and their responses were discounted. Of the remaining twenty-five respondents, twenty had experience of taking an exam at University A, four had not yet taken an exam, and one was unsure. Eight of the participants already had their exam papers language modified, twelve did not, three were unsure, and two chose not to respond to this question.

Results

Introduction

Both quantitative and qualitative data was gathered using the online survey and analysed using Microsoft Excel. The responses were used to identify themes around comprehension of examination language. Respondents were split into two groups: the ‘modified’ paper cohort, and the ‘unmodified’ paper cohort. As the two groups were not identical in size, responses to the survey are presented in the form of percentages to enable comparison.

Key themes

A number of themes become apparent when looking through the data, and these can be grouped into the following areas:

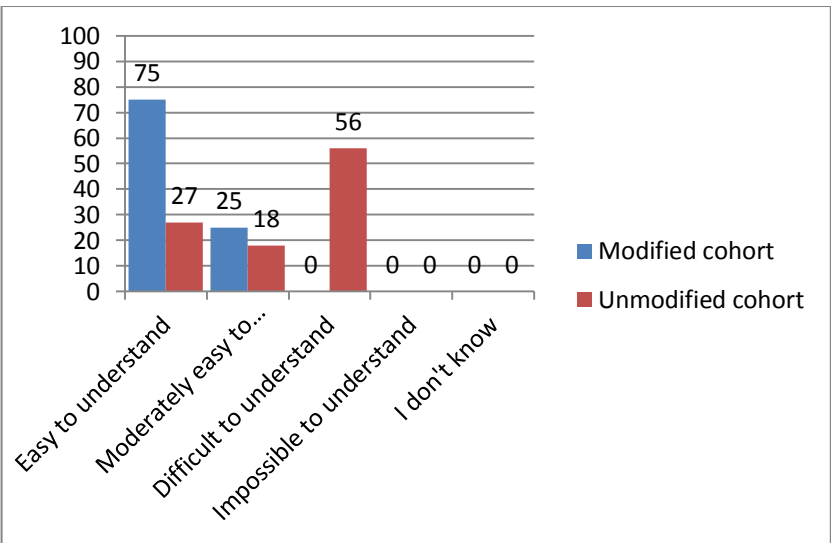
- 1. The ease of understanding instructions in papers which are modified versus unmodified
- 2. The ease of understanding the language and format of the ‘rubric’
- 3. Comprehension of potentially confusing words and phrases commonly used in examinations
- 4. The experience of examinations

The quantitative data from each of these categories is presented in table and figure form in order to aid understanding, and examined in greater detail in the Discussion section.

1. The ease of understanding instructions in papers which are modified versus unmodified

Of the 7 respondents whose papers are language modified, 6 (86%) agreed that the modified version was easier to understand than the unmodified version. Only 1 respondent felt that the original, unmodified version was easier. Participants from both cohorts were asked about the ease of understanding the instructions given in examination papers. Their responses are summarised in Figure 1.

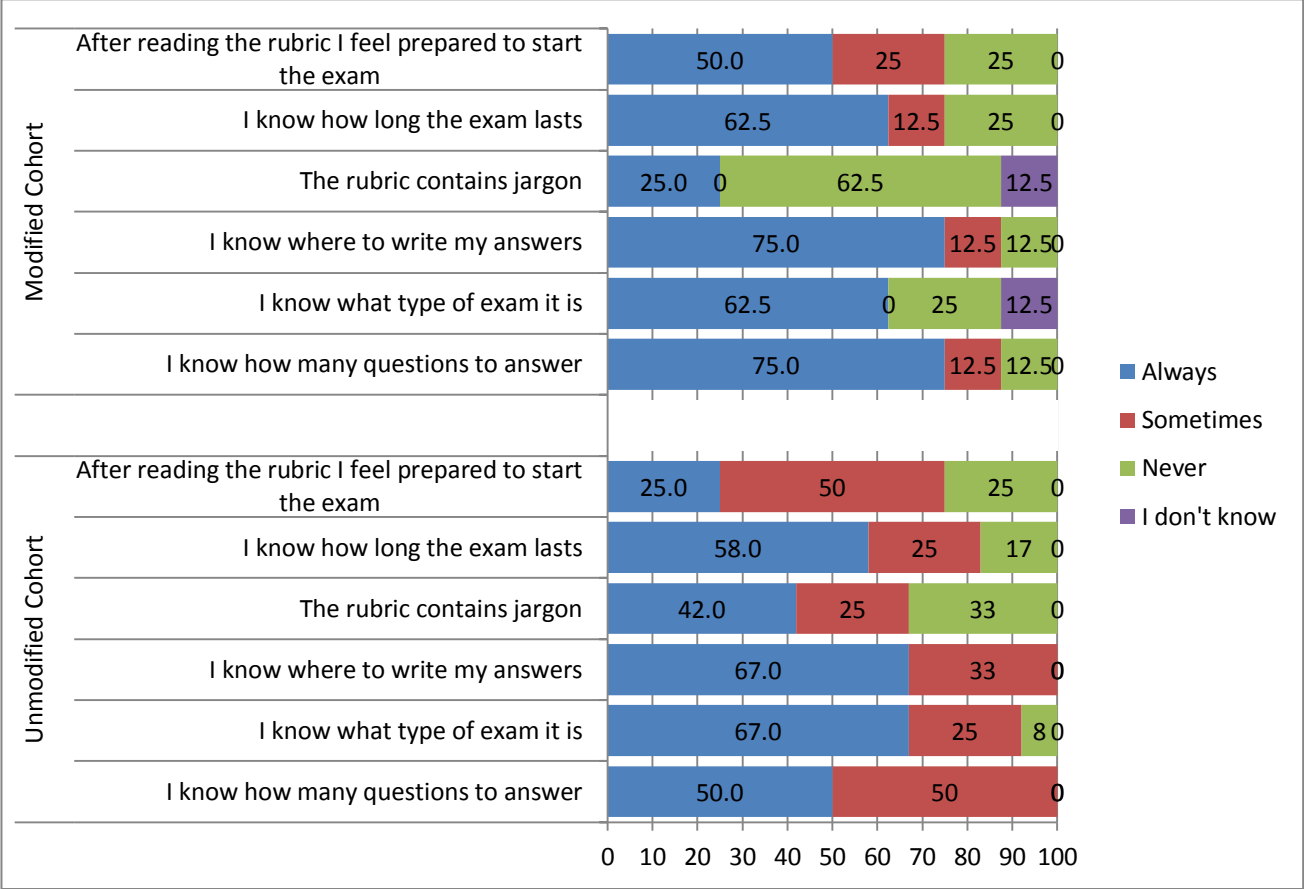
Figure 1: Responses to the question "Do you find that the instructions given in your exam papers are..." (Percentage of respondents by cohort)



2. The ease of understanding the language and format of the ‘rubric’

Anecdotally, the rubric is perceived as causing the most difficulty for students on the autism spectrum in accessing their exam papers. Both cohorts were asked about the ease of understanding the rubric in certain key areas, as indicated in Figure 2:

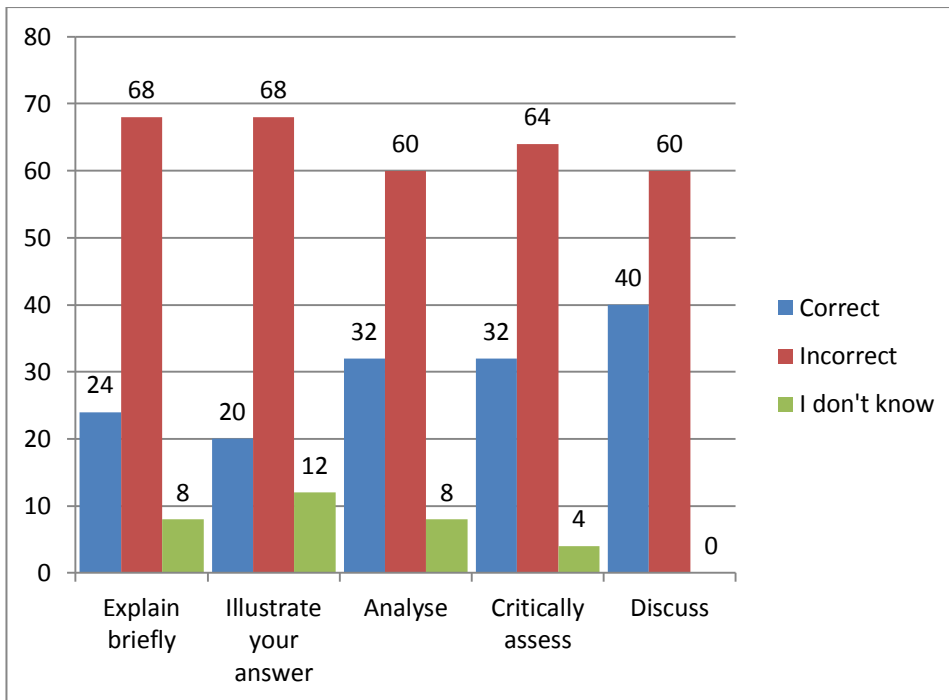
Figure 2: Ease of understanding the rubric (percentage of respondents by cohort)



3. Comprehension of potentially confusing words and phrases commonly used in examinations

Participants were asked about their understanding of five potentially ambiguous words or phrases commonly used in examination questions. Each word or phrase had five possible explanations, from which participants could only pick one, along with the option of ‘I don’t know’. Participants were scored as answering correctly or incorrectly, based on an instructional word glossary published by University A. Since comprehension of key words and phrases is not mitigated by language modification (rather, it is the reason for language modification), the results from both cohorts were considered together, as indicated in Figure 3.

Figure 3: percentage of respondents correctly identifying key words and phrases



4. The experience of examinations

Participants were asked to assess the impact of inaccessible examination language (Figure 4), and their perception of the language used in examinations (Figure 5):

Figure 4: the impact of confusing instructions in examinations (percentage of respondents, both cohorts combined)

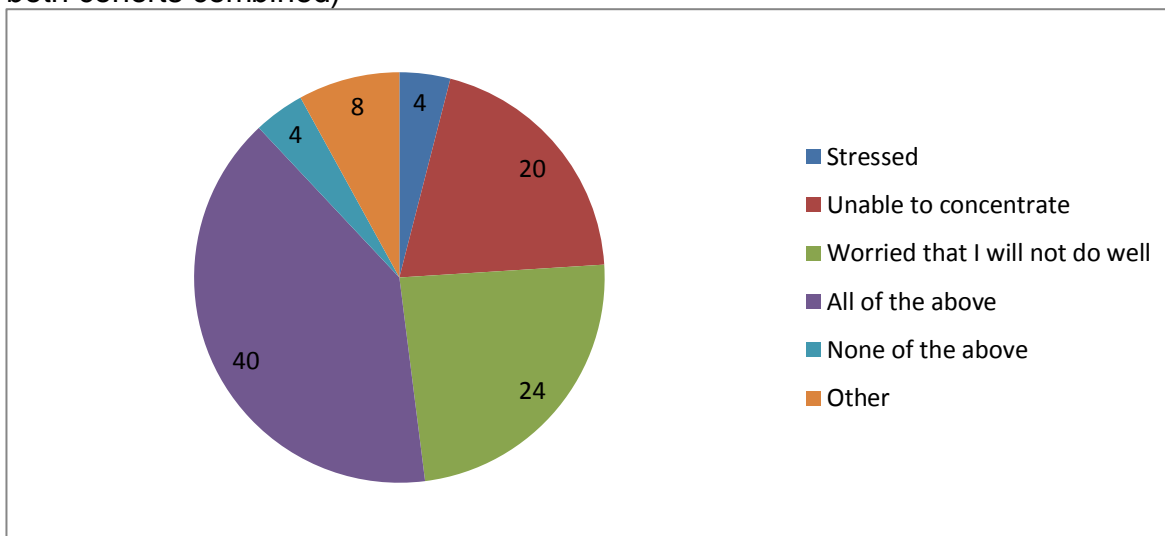
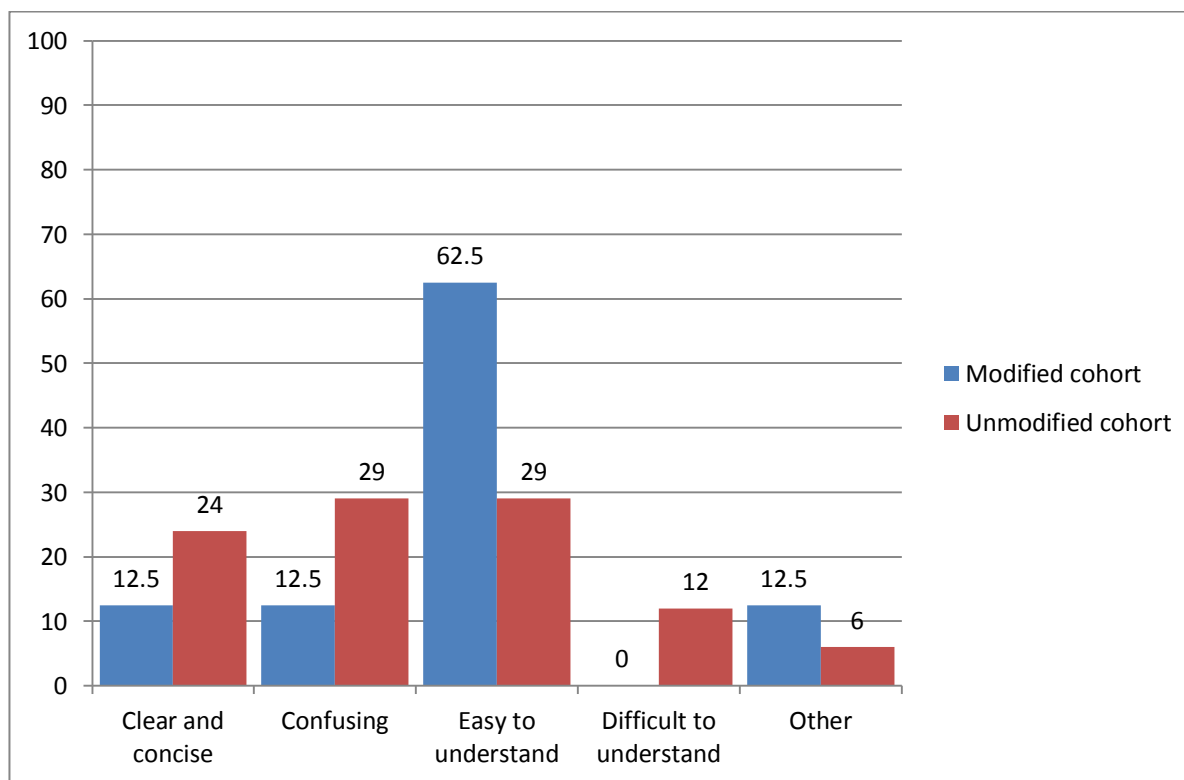


Figure 5: the perception of the language used in examinations (percentage of respondents, by cohort.)



Qualitative data

Participants were invited to highlight their experiences of the language used in examinations through the use of free text boxes. A full copy of these responses can be found in Appendix 3, with relevant responses quoted in the ‘Discussion’ section of this paper.

Discussion

The data gathered by the survey demonstrates that students on the autism spectrum experience differences in their ability to decode both ambiguous single-word terms, and more complex language units. The question asking students to identify the correct explanation for words and phrases commonly used in examinations underlines a difficulty in understanding key terms which lie at the heart of interpreting examination questions. Referring back to Huemer and Mann’s (2010) description of a “successful reader” as someone who “has the ability to accurately and fluently decode words so as to comprehend their meaning in isolation and in context” (p.485), it would appear that many students in this cohort do not meet this definition fully. Part of the issue may be that the terms were deliberately presented in isolation, rather than as part of a wider question, or placed alongside an example. Therefore there were fewer clues to be derived from context, and a greater emphasis placed on either knowing the correct answer, because it has been taught, or being able to make a ‘best guess’ based on existing knowledge of assessment carrier language. This fits with Martin and MacDonald’s (2003) theory regarding the impact autism has on the ability to engage pragmatic language, and therefore analyse meaning beyond semantics by engaging context, pre-existing knowledge and inferred intent (Morris, 1938).

Although studies have shown decoding skills are intact (Nation et al, 2006; Nation and Norbury, 2005; O'Connor and Klein, 2004; Myles et al, 2002; Frith and Snowling, 1983), this study appears to reveal that there are issues surrounding the decoding of certain key words in the examination context. Possible explanations for this, in addition to the impact autism has on pragmatic language, may include the noted discrepancy between reading comprehension and decoding ability (Nation et al, 2006), and on inferential comprehension (Myles et al, 2002) but may also highlight the impact autism can have on accuracy in reading and reading confidence (Nation et al, 2006). Furthermore, some of the incorrect answers given demonstrate the theory that people on the autism spectrum may be overly literal in their language decoding, thereby further impeding comprehension (Baron-Cohen, 1997; Ghaziuddin and Gerstein, 1996; Happé and Frith, 1994, Happé, 1993; Kerbeshian et al, 1990; Kanner, 1948). For example, 32% of respondents (across both the Modified and Unmodified cohorts) understood the phrase “illustrate your answer” to mean “You must draw a picture to explain your answer” or “You must draw a graph or diagram to explain your answer”, rather than the correct “It depends on the context of the question”. Likewise, 2 respondents (8%) thought that the term ‘discuss’ means “Imagine a conversation and write down what you would say”.

The qualitative data also reveals the confusion that ambiguous terms can cause:

Sometimes a question asks for 'your opinion' but I've been taught that it's not actually a personal opinion but arguments for and arguments against and to give a balanced answer... This is extremely confusing and I still don't know how to answer such a question. (Appendix 3.3)

Another respondent stated:

I have found the phrase 'identify and account for these forms' hard to understand when used on a language exam paper. I now understand it to mean 'say what they are' and 'why they are used'. But it took quite a few bad marks to finally get this. (Appendix 3.6)

However one respondent noted that science-based examinations are perhaps less subject to the problems of ambiguous language:

My exams have all been science based so generally the questions are concise and written in an analytical style anyway which suits me quite well. (Appendix 3.13)

Despite the potential for confusion, there seems to be little effort on the part of academic departments to assist students in learning the language of examinations; only 12% of respondents from both cohorts reported that their department had offered any specific tuition or advice on the key phrases used in examination questions.

In addition to issues of decoding, the survey responses reinforce the suggestion that differences in ToM and ‘mind-reading’ ability may affect reading comprehension (Happé and Frith, 1994). Some 80% of respondents from both cohorts answered ‘Yes’ to the question “Do you sometimes feel that you know what the answer to the question is, but you're not sure if it's the answer the examiner is looking for?”, with the qualitative data also suggesting that this difficulty with ‘second guessing’ can create additional anxiety:

I find it difficult to know what they mean. Sometimes when I felt that I gave the correct answer, the answer can be completely different and no aspect of my answer is found. Sometimes, the questions I find are similar and asking for the same thing when they have different answers. I sometimes misinterpret it wrong.

Sometimes I do not know what the questions means or how to approach to answering a question. If I do not understand, I will make my own interpretation because I do not want to lose marks. (Appendix 3.18)

This uncertainty may relate to the impact of weak central coherence and associated difficulty in establishing meaning without context, as discussed by Martin and McDonald (2004), Wahlberg and Magliano (2004) and Frith (1989). It also points to Martin and McDonald's theory (2003) that differences in pragmatic language use can negatively affect reading comprehension in addition to differences in decoding ability and higher order cognitive ability (Huemer and Mann, 2010). One respondent notes a difficulty in processing complex information:

Often when there is too much information on the page, it can be difficult to process all of this information. I would find it extremely useful if the question was dissected into smaller parts of exactly what is required. (Appendix 3.5)

This perhaps points towards a difference in central coherence and the impact effortful processing can have on working memory load and comprehension.

The survey results also reinforce the theory that the language used in examinations can exacerbate an already stressful, anxiety-inducing situation. As one respondent stated:

I get very anxious in exams because I don't know what to expect and find the instructions confusing. Sometimes I spend so long thinking and worrying about the instructions I don't leave enough time for the questions. (Appendix 3.19)

Overall, 88% of respondents across both cohorts reported feeling either stressed, unable to concentrate, worried that they would not do well, or a combination of all three when the language used in examinations is ambiguous or confusing. 20% felt unable to concentrate, perhaps suggesting a link between examination anxiety and effective working memory (Sorg and Whitney, 1992).

The differences noted in decoding key examination language may further explain the difficulties the unmodified cohort demonstrated in their assessment of the ease of understanding the instructions given in examination papers. The entire Modified cohort (100%) found the instructions used in examinations to be either 'Easy to understand' or 'Moderately easy to understand', whereas only 45% of the Unmodified cohort felt this to be the case, with 55% finding the instructions to be 'Difficult to understand'. This may indicate the success of language modification in removing some of the barriers to comprehension created by ambiguous wording or poor question structure. Language modification could therefore be seen as mitigating against the disconnect between language structure and content (Joliffe and Baron-Cohen, 1999), requiring less emphasis on the ability to piece together contextual information in order to interpret ambiguities in the text (Wahlberg and Magliano, 2004).

This is further reflected in the respondents' rating of the ease of understanding various elements of the rubric, where the results identified less confidence amongst the Unmodified group in understanding what is expected of them in the examination, particularly around knowing how many questions to answer (75% of the Modified group answered 'always' vs. 50% of the Unmodified group), and feeling prepared to start the exam after reading the rubric (50% of the Modified group answered 'always' vs. 25% of the Unmodified group). The Modified cohort also identified less jargon in the rubric compared to the Unmodified cohort

(25% 'always' or 'sometimes' vs. 67% 'always' or 'sometimes'). The effect of language modification on ease of understanding is therefore assumed to be broadly beneficial. As one respondent noted:

Language modification is really helpful for me because it helps me undersand [sic] the quetsions [sic] better and I spend less time worrying about understanding them. (Appendix 3.20)

Conclusion and recommendations

It is clear from the responses to this survey that language modification is both necessary and effective in mitigating the effect of ambiguous examination language, and therefore reducing one aspect of examination anxiety and allowing students to feel more confident about answering examination questions. Of course, not all people on the autism spectrum find ambiguous language difficult or obstructive; 53% of respondents from the unmodified cohort found the language used in examinations to be either 'clear and concise' or 'easy to understand'. However, it is not possible to determine from this study what subject these students are studying, or whether the language and structure of their exam papers is already unambiguous. Likewise, it is not possible to establish whether respondents' experience matches their achievement in examinations; an interesting area for further study would be to track attainment alongside language modification.

Since it is not ethical to expect students to sit unmodified versions of exam papers when they have a noted difficulty with ambiguity, it is not possible to establish a 'before and after' comparison of the efficacy of language modification, and this is recognised as a limitation of this study. A further limitation is that, due to withdrawal of permission for interviews, this study was carried out purely through a written survey which itself is subject to the vagaries of communication and comprehension. It would also be interesting to measure individual students' working memory capacity both before and during examinations, although again, this is neither ethical or practical without arranging additional testing under examination conditions. This was a small-scale study; there would be benefit in conducting a wider study, and comparing the AS cohort with a neurotypical cohort to ascertain whether difficulties with language in examinations are particular to students on the autism spectrum, or shared by the student body as a whole.

What is clear is that, for many students on the spectrum, the language use in examinations can be unnecessarily cumbersome and confusing, causing additional anxiety and concern about performance; this in itself may be an argument for a more consistent and inclusive approach to examination paper design. It is not only the vocabulary used which is fundamentally important, but also the structural elements of language, the syntax and semantics, which require attention through the process of language modification (Numminen, 2002). This would not only benefit students on the autism spectrum; other groups of disabled learners (such as those with Specific Learning Difficulties, and those who are d/Deaf or hard of hearing), and learners for whom English is not the first language are also likely to gain from more efficient language use in examinations.

It is therefore recommended that all university examination papers incorporate clarity of language and structure along with other elements of inclusive design, and that further guidance is produced to ensure a more consistent, accessible approach. Academic departments also have a responsibility to ensure that students are given specific advice and tuition on the meaning of key phrases used in examinations. Such changes would allow

students to demonstrate their knowledge more effectively within the confines of the examination setting; to minimise bias and maximise potential.

This paper was originally submitted as part of assessment for a Postgraduate Certificate in Autism (Adults) undertaken with the University of Birmingham. Full permission for publication has been given.

The author currently carries out the language modification of examination papers for students on the autism spectrum at the University of Leeds, and has developed service provision to manage this.

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Part 2 : APPENDICES

APPENDIX 1: Transcript of email sent to all registered students on the autism spectrum

15 October 2013

I wanted to contact you to let you know of a small research project being carried out by one of our Disability Coordinators, [deleted], as part of a postgraduate course she is doing, and to present an opportunity for you to participate.

The focus of this project is on the language modification of exam papers, which is the process of adapting the language used in exam papers to make sure that it is written in plain English and that the instructions and questions can be understood by someone on the autism spectrum.

You are invited to take part in this important research project because you are a student who is diagnosed as being on the autism spectrum, including Asperger Syndrome. Some students on the autism spectrum will have their exam papers language modified; others will not. [Deleted] needs responses from both groups of students. You can take part in this project even if you have not yet undertaken an exam at the [deleted].

Participation in this project is entirely voluntary and primarily via a short online survey which will be sent to you by email if you agree to take part. This survey is entirely anonymous. [Deleted] will not be able to collect any details about who you are. Any responses used in the final write up of the project will be anonymous.

If you are interested in participating further in this project, you may also be invited to come in for a short (30 minute) informal one-to-one discussion with [deleted] looking at examples of exam papers before and after the language used in the paper has been modified. Again, the results of this discussion will be anonymous in the final write up.

As stated above participation is entirely voluntary, and you do not have to take part in either part of the project (the online survey and the discussion).

If you would like to take part in this project, please reply to this email directly, or email [deleted] at [deleted]. You will be sent a copy of the online survey. If you would also like to attend an informal discussion with [deleted], please make this clear in your email.

The closing date for registering your interest in taking part in this project is Friday 25 October 2013.

APPENDIX 2: TRANSCRIPT OF ORIGINAL SURVEY QUESTIONS.

Please note that formatting and question logic has been lost in the conversion from online/pdf format to Word.

Language modification survey

You have received this email from [deleted], Disability Coordinator at the [deleted].

[Deleted] has written the following message:

I am doing a research project for my Postgraduate Certificate in Autism through the University of Birmingham.

The focus of this project is on the language modification of exam papers, which is the process of adapting the language used in exam papers to make sure that it is written in plain English and that the instructions and questions can be understood.

You have been invited to take part in this survey because you are a student who is diagnosed as being on, or who identifies with the autism spectrum, including Asperger Syndrome. Some students on the autism spectrum will have their exam papers language modified; others will not. I need responses from both groups of students.

This survey is entirely anonymous. I will not be able to collect any details about who you are. Any responses used in the final write up of the project will be anonymous. This research project

has received ethics approval from both the University of Birmingham, and the [deleted]. Key findings from the project will be made available to all those students who are invited to take part in the survey.

If you find it difficult to fill in online forms, email me at [deleted] and I can send you a printed version. Alternatively, you can give your opinions about language modification by email to the same email address.

Thank you for your help.

[Deleted]

***Required**

1. At what level of study are you registered? *

Mark only one oval.

- ☐ Foundation
- ☐ Undergraduate
- ☐ Taught Masters
- ☐ Other:

2. Do you receive Disabled Students Allowances (DSA)? (This is funding from the government to enable you to study at University. If you receive DSA you will have had a Study Needs Assessment) *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ I don't know

3. Do you have to take exams as part of your course? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ I don't know

After the last question in this section, skip to question 11.

4. Have you taken an exam at the University of Leeds yet? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ I don't know

Skip to question 11.

About language modification

5. Are your exam papers language modified? (This means that the language used in your exam papers is adapted to make sure that it is written in plain English, and that the instructions can be understood clearly. This is usually carried out by your Disability Coordinator.) *

Mark only one oval.

- ☐ Yes *Skip to question 6.*
- ☐ No *Skip to question 9.*
- ☐ I don't know *Skip to question 9.*

About language modification continued

6. If your exam papers are language modified, has this been the case since your first set of exams at University, or was this recommendation added at a later date? *

Mark only one oval.

- ☐ My papers have been modified since my first set of exams at university. *Skip to question 8.*

- The recommendation for language modification was added at a later date. *Skip to question 8.*
- I don't know *Skip to question 10.*

About language modification continued

7. Think about your experience of taking unmodified exam papers, and compare it with your experience of taking modified papers. *

Mark only one oval.

- I find the unmodified (original) exam papers easier to understand *Skip to question 10.*
- I find the modified (plain English) exam papers easier to understand *Skip to question 10.*
- I don't notice whether or not papers have been modified *Skip to question 10.*
- Other:

If your papers ARE language modified

8. Do you find that the instructions given in your exam papers are: *

Mark only one oval.

- Easy to understand - I know what the question is asking me after reading the question once or twice *Skip to question 7.*
- Moderately easy to understand - I can work out what the question is asking me, but I have to read the question several times and think about what it means more carefully *Skip to question 7.*
- Difficult to understand - I do not know what the question is asking me when I first read it, and I am not sure if I am answering the question in the correct way *Skip to question 7.*
- Impossible to understand - I cannot work out what the question is asking me, and I cannot answer it *Skip to question 7.*
- Other: *Skip to question 7.*

If your papers are NOT language modified

9. Do you find that the instructions given in your exam papers are: *

Mark only one oval.

- Easy to understand - I know what the question is asking me after reading the question once or twice. *Skip to question 10.*
- Moderately easy to understand - I can work out what the question is asking me, but I have to read the question several times and think about what it means more carefully. *Skip to question 10.*
- Difficult to understand - I do not know what the question is asking me when I first read it, and I am not sure if I am answering the question in the correct way. *Skip to question 10.*
- Impossible to understand - I cannot work out what the question is asking me and I cannot answer it. *Skip to question 10.*
- Other: *Skip to question 10.*

About exam papers

This section is about your experience of taking exams at university. You need to think about exams you have taken whilst study at Leeds.

10. Think about the 'Rubric' of your exam papers. The rubric is usually on the front page of the exam paper. It contains the instructions for the exam, such as how many questions to answer, how long the exam is, whether you can use calculators or dictionaries etc. *

Mark only one oval per row.

	Always	Sometimes	Never	I don't know
I can understand how many questions I need to answer in each section of the exam.	0	0	0	0
I can understand what type of examination it is (such as an Open Book exam).	0	0	0	0
I can understand where I need to write down my answers (such as in an answer booklet or on a MCQ answer sheet).	0	0	0	0
The instructions contain 'jargon' and words or phrases I don't understand.	0	0	0	0
I can understand how long the exam lasts.	0	0	0	0
After reading the rubric, I feel prepared to start the exam.	0	0	0	0

Skip to question 12.

About your past experience of exam papers

If you have not taken any exam papers at university, please think about exams you have taken in the past, perhaps at school (such as A-Levels).

11. Think about the 'Rubric' of your exam papers. The rubric is usually on the front page of the exam paper. It contains the instructions for the exam, such as how many questions to answer, how long the exam is, whether you can use calculators or dictionaries etc.

Mark only one oval per row.

	Always	Sometimes	Never	I don't know
I can understand how many questions I need to answer in each section of the exam.	0	0	0	0
I can understand what type of examination it is (such as an Open Book exam).	0	0	0	0
I can understand where I need to write down my answers (such as in an answer booklet or on a MCQ answer sheet).	0	0	0	0
The instructions contain 'jargon' and words or phrases I don't understand.	0	0	0	0
I can understand how long the exam lasts.	0	0	0	0
After reading the rubric, I feel prepared to start the exam.	0	0	0	0

Essay-based exams

This question is about essay-based exams. These are exams where you have to write long essay style answers to questions.

12. Have you taken essay-based exams whilst at university? *

Mark only one oval.

- Yes *Skip to question 13.*
- No *Skip to question 14.*
- I don't know *Skip to question 14.*
- Other: *Skip to question 14.*

Essay-based exams continued

13. Think about the essay-based exams you have taken at university. Look at the following statements and indicate which statement or statements you agree with. You can select more than one statement. *

Mark only one oval per row.

	I agree	I neither agree nor disagree	I disagree
I find it easy to understand what the question is asking me and I know what answer to give.	0	0	0
I know how much I am expected to write to answer the question.	0	0	0
I find essay-based exams easy.	0	0	0
I get good marks in essay-based exams.	0	0	0

Multiple Choice Question (MCQ) exams

This question is about Multiple Choice Question (MCQ) exams. These are exams where you have to pick one or more option as an answer to the question. You record your answers by making pencil marks on a pre-printed answer sheet.

14. Have you ever taken a Multiple Choice Question (MCQ) exam whilst at university? *

Mark only one oval.

- Yes *Skip to question 15.*
- No *Skip to question 16.*
- I don't know *Skip to question 16.*
- Other: *Skip to question 16.*

Multiple Choice Question (MCQ) exams continued

15. Think about any Multiple Choice Question (MCQ) exams you have taken at university. Now look at the following statements and indicate which statement or statements you agree with. You can select more than one statement. *

Mark only one oval per row.

	I agree	I neither agree nor disagree	I disagree
I find MCQ exams easy because I can always work out the correct answer.	0	0	0
I find MCQ exams difficult because I cannot work out the	0	0	0

correct answer.			
I find MCQ exams difficult because I spend too long thinking about all the possible answers.	0	0	0
I find MCQ exams difficult because the wording of the options is difficult to understand.	0	0	0
I get good marks in MCQ exams.	0	0	0
I do not get good marks in MCQ exams.	0	0	0

Potentially confusing words and phrases

Now I would like you to think about some common words and phrases which are often used in exam papers. For each word or phrase I would like you to tell me what you think it means, or what it is instructing you to do. Choose your answer from the selection given.

16. The phrase 'explain briefly' means: *

Mark only one oval.

- ☐ Explain your answer in 2-3 words.
- ☐ Explain your answer in 2-3 sentences.
- ☐ Explain your answer in no more than one side of A4 paper.
- ☐ It depends how many marks are available for the question.
- ☐ It depends on the context of the rest of the question.
- ☐ I don't know.

17. The phrase 'illustrate your answer' means: *

Mark only one oval.

- ☐ You must draw a graph or diagram to explain your answer.
- ☐ You must draw a picture to explain your answer.
- ☐ You must use examples to explain your answer.
- ☐ It depends on the context of the question.
- ☐ I don't know.

18. In an exam question, the word 'analyse' means: *

Mark only one oval.

- ☐ Give an argument for, and an argument against the statement made in the question
- ☐ Find the main ideas, how they are related and why they are important.
- ☐ Study the question carefully before giving your answer
- ☐ Give an overview of the main themes
- ☐ It depends on the context of the question.
- ☐ I don't know

19. The phrase 'critically assess' means: *

Mark only one oval.

- ☐ Give a detailed account of the features of something without interpreting the information
- ☐ Use examples to show a concept
- ☐ Weigh arguments for and against something, assessing all evidence. Decide which opinions, theories, models or items are preferable
- ☐ Identify and describe the development or history of
- ☐ It depends on the context of the question
- ☐ I don't know

20. In an exam question, the word 'discuss' means: *

Mark only one oval.

- ☐ Describe your answer using examples
- ☐ Imagine a conversation and write down what you would say
- ☐ Make a judgement on whether the statement in the question is correct
- ☐ Present and give a judgement on the value of arguments for and against, consider all angles
- ☐ It depends on the context of the question
- ☐ I don't know

21. Now tell me about any other words or phrases used in exam questions which you find difficult or confusing.

Your experience of examinations

I would like you to tell me about your experience of taking exams at university. If you have not yet taken an exam at university, think about the most recent exams you have done (perhaps at school or college).

22. Do you find the language used in exams at university: *

Mark only one oval.

- ☐ Clear and concise
- ☐ Confusing
- ☐ Easy to understand
- ☐ Difficult to understand
- ☐ Other:

23. When the instructions for the exam, or the way the questions are written are confusing, do you feel: *

Mark only one oval.

- ☐ Stressed
- ☐ Unable to concentrate
- ☐ Worried that you will not do well in the exam
- ☐ None of the above
- ☐ All of the above
- ☐ Other:

24. Do you sometimes feel that you know what the answer to the question is, but you're not sure if it's the answer the examiner is looking for? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ I don't know
- ☐ Other

25. Do you find it helpful to read the instructions or the questions out aloud during the exam? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ I don't know

- Other

Support from your academic school

26. Has your academic school ever given you any specific tuition or advice on the key phrases used in exam questions? *

Mark only one oval.

- Yes
- No
- I don't know
- Other:

27. Do you use past papers as part of your exam preparation? *

Mark only one oval.

- Yes
- No
- I don't know
- Other:

Other comments

28. Please use this space to tell me anything else (good or bad) about your experience of the language used in exams.

APPENDIX 3: TRANSCRIPT OF QUALITATIVE RESPONSES FROM SURVEY

(NB: reproduced verbatim).

Q21: Now tell me about any other words or phrases used in exam questions which you find difficult or confusing.

1. "Highlight"
2. 'Consider'
3. Sometimes a question asks for 'your opinion' but I've been taught that it's not actually a personal opinion but arguments for and arguments against and to give a balanced answer... This is extremely confusing and I still don't know how to answer such a question.
4. Questions that are unnecessarily long are sometimes confusing, as I begin to focus on the details of the question rather than the question itself (weak central coherence).
5. Often when there is too much information on the page, it can be difficult to process all of this information. I would find it extremely useful if the question was dissected into smaller parts of exactly what is required. "
6. I have found the phrase 'identify and account for these forms' hard to understand when used on a language exam paper. I now understand it to mean 'say what they are' and 'why they are used'. But it took quite a few bad marks to finally get this.

7. The word "illustrate" may confuse some people to mean draw or sketch a picture.
8. Words which are ambiguous.
9. Words phrases with more than one meaning

Q28: Please use this space to tell me anything else (good or bad) about your experience of the language used in exams.

10. I may have answered this question in the previous open box.
11. I would find it extremely useful if a single question (for example an essay type question) was broken down in to the key points on what is required.
12. I find many ways of interpreting any one question and I believe clearer explanations through dissection of the question would help. "
13. My exams have all been science based so generally the questions are consise [sic] and written in an analytical style anyway which suits me quite well
14. I have found the very strong wording about not cheating, plagiarism, unauthorised items in the exam room etc. on some of the answer booklets, although important, to dominate my thoughts when I am about to start an exam and make me quite anxious. This is not because I think I have broken the rules, but because that is all you can read before the start of an exam whilst looking at the answer booklet, possibly for many minutes before you are told to begin. Maybe these instructions could be inside the cover?
15. No.
16. Ambiguous words are confusing, and distinguishing between everyday usage and technical usage in academic disciplines
17. The language used is designed to ensure that you know what is expected by the examiners in your answering of the question. At times, it can be difficult to get a clear sense of their meaning, but after a couple of rereadings [sic], I usually find I understand the meaning of the question.
18. I find it difficult to know what they mean. Sometimes when I felt that I gave the correct answer, the answer can be completely different and no aspect of my answer is found. Sometimes, the questions I find are similar and asking for the same thing when they have different answers. I sometimes misinterpret it wrong. Sometimes I do not know what the questions means or how to approach to answering a question. If I do not understand, I will make my own interpretation because I do not want to lose marks. I might have missed some points in this section.
19. I get very anxious in exams because I don't know what to expect and find the instructions confusing. Sometimes I spend so long thinking and worrying about the instructions I don't leave enough time for the questions.

20. Language modification is really helpful for me because it helps me undersand [sic] the questions [sic] better and I spend less time worrying about understanding them.

The Nature of Inclusive Learning Environments (ILEs)

Ivan Newman & John Conway,

Royal Agricultural University, Cirencester

Abstract

This study identifies key characteristics of the concept of Inclusive Learning Environments (ILE) in Higher Education and barriers to achieving them as viewed by specialist practitioners supporting learners with Specific Learning Difficulties, SpLDs. Nine main themes emerge as important components of an ILE, ten aspects of SpLDs are suggested as unlikely to benefit significantly from an ILE and eight areas are identified as barriers to an ILE. The study indicates that there is no widely defined concept of an ILE nor effective demonstrators and that implementing an effective ILE will require significant senior management commitment and planning by the Higher Education Institution, widespread staff and learner training, changes in attitudes by some academic staff, financial resources and time.

Overview

This study provided input to the Department for Business Innovation and Skills 3-month consultation (BIS, 2015) regarding proposed changes to Disabled Students' Allowances (DSA) (BIS, 2014), which promote the idea of Inclusive Learning Environments (ILE) at Higher Education Institutions (HEIs) in partial discharge of HEIs' duty to make "reasonable adjustments" for students with disabilities under the Equality Act (UK Government, 2010). As the term ILE appeared incompletely understood, this study gathered views from practitioners supporting such students, particularly those with Specific Learning Difficulties (SpLDs), to illuminate what the term might or might not embrace and barriers to an ILE's implementation.

Method

Members of the Association of Dyslexia Specialists in Higher Education (ADSHE) and the National Association of Disabilities Practitioners (NADP) were invited, by electronic discussion forum request, to participate in a questionnaire survey. Some 1,650 email addressees were eligible to see the invitation. Additionally, the author approached active practitioner colleagues but members of neither organisation. Research was conducted under British Education Research Association's Ethical Guidelines (BERA, 2011) and the provisions of the Data Protection Act (1998).

The questionnaire comprised just four questions to be answered textually in a personal or, for those appropriately positioned in an HEI, a managerial capacity. An interpretivist analytical approach was adopted.

Sixty-four questionnaires were returned, representing practitioners working at 54 HEIs; 49 of which were English, 4 Welsh and 1 Scottish. Two freelance practitioners (Specialist Study Skills Tutors) did not specify their HEIs. Respondents represented a wide cross-section of sector roles, a number held multiple roles; see Table 1.

Table 3: Responses by respondent role

Respondent Role	Number Responding N=64
Head of Disability Service or holding a management role therein	17
Specialist Study Skills Tutor	41
Specialist SpLD Diagnostic Assessor	13
Lecturer	2
Learning Development	2
AT Trainer	1
Specialist Mentor	1
Disability Advisor	3
Head of Assessment Centre or holding a management role therein	1

The nature of an ILE

Nine themes emerge regarding the components of an ILE:

- Philosophy or mission.
- Management.
- Technology.
- Assessment design.
- Design of course specific materials.
- Design of non-course specific services.
- Academic staff awareness, training and attitude.
- Wellbeing support environment.
- The built environment.

Philosophy or mission

Respondents show considerable commonality in describing an ILEs 'philosophy', its 'mission', identifying that HEIs must work right across their organisations to deliver an ILE and necessarily involve HEIs' top-level management to allocate resources for such wide-ranging activities. Respondents' further note that strong "buy-in" is required from academic staff due to the need to make their course materials and assessment methods more widely accessible. One respondent cautions the need to ensure that academic rigour is not compromised, which begs the question that a debate regarding the nature of academic rigour might be a sine qua non of any change process regarding assessment accessibility and its delivery. Respondents believe that some teaching staff's defence of existing, non ILE assessment methods or teaching delivery, because "that's the way it's always been done" is not a sufficient response. Respondents also envisage that ILEs have the potential to allow all students to access the effective range of support techniques developed over the past 10 or so years for those with SpLDs.

Management

Respondents highlight the need for ILEs to be implemented in a managed way and see leadership as a vital component in that achievement; in the absence of this approach they fear that an ILE cannot be achieved and learners will suffer. In many respects, respondents identify a number of key tenets to successful project management within any organisation – top level management commitment permeating the whole organisation, honesty regarding where the organisation is now, realism about what the organisation wishes to achieve and using appropriately qualified in-house resources to reach those goals.

Technology

Technology is seen as a significant enabling force in achieving an ILE. Numerous respondents use the term Virtual Learning Environment (VLE) to encapsulate the totality of what technology can offer. Respondents specifically mention some necessary components of a VLE - online resources, lecture support, seminar/small group support, book reading software/online books and campus wide resources.

Respondents are clear regarding the significant role of technology within an HEI's campus, but unclear regarding technology support for off-site teaching, such as in nursing, medicine, veterinary placements, for which no suggestions were offered. Respondents are clear that design to ensure accessibility of the electronic delivery 'container' [usually a Moodle] and the online materials is as important as the content itself. This accessibility 'imperative' implies that staff responsible for technology design would benefit from training in the characteristics of accessibility. Respondents feel that learners, too, would need training on how to take advantage of the available assistive technology (AT).

Even with the above components fully implemented, residual issues may still exist, for example, not all e-books can be used with text-to-speech readers, books can be 'locked' from this feature due to reasons of copyright/commercial protection. The accessibility and acceptability of lectures captured in a VLE will still depend on the manner of delivery, the presentation of the contents and how the images/sound captured interacts with other AT.

Design of course specific materials

Respondents identify features which could make a significant difference to accessibility, covering both the delivery of teaching, as well as supporting materials. The involvement of departmental heads is seen as key to achieving accessible delivery and materials together with an audit of current approaches. Suitably trained and supported academic staff are expected to originate new material. Respondents feel that less emphasis on a pure lecture format as the main teaching method is desirable.

Respondents expect that, for each component of their teaching, academic staff should design and implement course with accessibility placed at their core. Knowledge of the range of accessibility requirements is believed crucial to good design of materials. Standardised designs/templates should be available to academic staff to lower the barriers to usage and to speed origination. Respondents also stressed the value of HEIs' disability support teams in working closely with academics and others in delivering accessible materials. Academic staff are also seen as needing both to accept the existence of learning disabilities and to understand their impact. Such redevelopment of materials implies significant commitment and workload, further implying that those engaged in the process at least accept the need for accessibility and at best enthusiastically embrace difference.

Assessment design

The majority of respondents identify the need to make coursework and exam assessments accessible. However, respondents do not offer specific suggestions as regards how such assessment methods might be changed within an ILE. This omission is rather surprising because, whether as specialist study skills tutors or as holders of management positions with HEIs' disabilities support teams, respondents would possess experience of assessment methods which had apparently disadvantaged learners with SpLDs, the issues connected with persuading academic staff of such a disadvantage and/or in organising appropriate access arrangements.

Design of non-course specific services

Respondents see the requirement within an ILE for non-course specific services, and their supporting materials, to be available for all students. Making course content, the teaching thereof and assessments more accessible are stated as necessary but not sufficient elements in students' academic success. Knowing how to study, how to express knowledge and exercise critical thinking are also fundamental skills. With participation widening in HE, respondents see a need for widespread availability of tuition on the 'how' of learning. This is reflected in respondents' views that the benefits of the specialist one-to-one tuition, currently available only to students with DSA, should be available for all learners.

Academic staff awareness, training and attitude

Respondents recognise that significant work is required by academic staff to achieve accessibility in their teaching which is reflected in the range of suggestions and their level of detail, and are clear that academic staff hold the primary responsibility for good teaching methods. However, respondents acknowledge that some academics are sceptical about the existence of SpLDs, influencing the empathy with which they accommodate those learners. The term 'academic staff' refers to all engaged in imparting knowledge to learners or supporting their assessment, from professorial department heads to postgraduate students who mark essays. Respondents mention academic staff's need to accept that learning difficulties exist and fervently hope that those same staff "go out of their way" to ensure all learners can learn.

Wellbeing support environment

Respondents identify the benefits of extending to all students the support which has previously mainly been available to SpLD learners under DSA. They recognise that each learner, for a wide variety of reasons, has a preferred way of learning and see ILEs as having the potential to enhance the learning experience for all. However, they see ILEs as requiring the involvement of specialist individuals who can provide all students with the learning support they require, at a pace they can absorb, with the repetition required to gain automaticity and the empathy to handle the socio-emotional aspects of experiencing any study difficulties.

The built environment

Respondents mention that, for some learners, physical university environments presents problems and suggest a range of actions to address these. Although, for someone without an SpLD the issues underlying these suggestions regarding the built environment may seem trivial or even hard to credit, for the learner possessing them, respondents note they can be major concerns. For example, attending lectures or seminars assumes the learner can find the room location, even after numerous previous attendances. Having found the correct destination, for some, the fluorescent lighting can make study very taxing due to flicker or spectrum. Some SpLD learners are easily distracted by noise and movement in communal areas or by inappropriate seating.

SpLD issues not addressed by an ILE

Respondents suggest ten areas in which issues would remain for SpLD learners despite the presence of an ILE. It is worth noting that the ILE which respondents have in mind is, in the absence of a generally accepted model, one of their own conception and may, indeed, be idealised. These unaddressed areas are:

1. Cognitive skills deficits.
2. Literacy skills deficits.
3. Life skills deficits.

4. Study skills deficits.
5. Challenges presented by AT.
6. Co-occurring learning difficulties.
7. Socio-emotional and mental health issues.
8. Metacognition.
9. Transition into university.
10. Accessible assessment formats.

Cognitive skills deficits

Respondents identify the measurable and typical characteristics of people with SpLDs when compared to their peers: slower processing speeds, less effective working memory, shorter attention spans, less effective attention, extended times to gain automaticity, weak sequencing abilities and the need for strategies together with overlearning to compensate. Due to the uniqueness of each SpLD diagnosis, respondents feel it unlikely that an ILE would have the ability to address the complete range of issues without specialist support.

Literacy skills deficits

Respondents note that learners with SpLDs typically need considerable support in grammar, syntax, spelling, sentence/paragraph/essay structuring with which their education to date has been unable to furnish them. Respondents' experience with HEIs is that these areas of literacy skills deficits are not always effectively taught, if taught at all. Due to SpLD learners' complex interaction of issues, the one-to-one specialist support model has been the only way the effects of these deficits have been ameliorated. The problem, respondents mention, is exacerbated when learners have had previous poor educational outcomes, possibly due to their SpLDs, meaning that they start studying at their HEI with a low base of literacy skills. Respondents' experience is that for SpLD learners to gain these literacy skills requires patient teaching done at a learner's own pace over considerable time.

Life skills deficits

Respondents note that an individual's time management, planning, organisation and execution of work are abilities which an ILE may not address. As with life more generally, achievement at university depends on an individual's ability to self-organise. Although organisational issues are noted by respondents as common across the SpLD range, they comment that for some students, for example, those with a diagnosis of dyspraxia, ADHD, ASD, the problems can be profound.

Study skills deficits

Respondents further comment that developing critical thinking skills, structuring/ sequencing/ connecting ideas, contextualising tasks, finding/ using references appropriately, reading and notetaking techniques typically require significant demonstration, explanation and repetition for SpLD learners. Respondents feel these issues would remain were an ILE to be implemented. Respondents note the need of learners with SpLDs to work on their study skills at their own pace, in their own way, which they felt an ILE may not allow learners to do; ILEs might be paced at the speed of the many, not the few. Respondents also identify that whilst an ILE may, in some way, assist in ameliorating these issues, SpLD learners would need to know how to navigate their ILE to best profit from it.

Challenges presented by assistive technology

Respondents note that VLE could offer a number of potential benefits to all students, not just those with SpLDs. There is no standard idea of a VLE. Respondents caution that whatever

assistive technology (AT) is implemented, the learners will, self-evidently, need to be able to use it; for some SpLD learners, gaining automaticity in such usage can be very slow. Respondents also identify that elements of AT may not work for individual students; an ILE would need to be able to identify alternatives. Some aspects of AT may not work together, for example, e-books may not be usable with text-speech software, this latter being frequently used by SpLD students. Some respondents also noted that there are existing issues with teaching staff worrying about intellectual property rights, leading to reluctance and, in some cases, refusal, to allow lecture and seminar recording.

Lecture capture, as part of a VLE, is given as example of an alternative to one current “reasonable adjustment” (Equality Act, 2010) of individual students video or audio-recording lectures. However, it may be that if an HEI’s VLE becomes the only way an SpLD learner is allowed to access recorded material this would remove flexibility from the student to learn in his/her own way using tools which better suit the individual’s learning style than the VLE. One respondent suggests that instead of a learner being supplied with a range of AT software or hardware, based on a single needs’ assessment, some of which they may not use, the student could try different approaches over time using ‘loaned’ software to see which gave them the most effective support. This approach might allow a reduction in AT expenditure. However, software licencing arrangements would likely need adjustment to accommodate this idea.

Co-occurring learning difficulties

Respondents discuss the way in which SpLD characteristics present on a spectrum with frequent co-occurrence which presents a complex set of difficulties. Respondents further note, as mentioned above, that each SpLD learner’s profile is unique, making the prediction of issues for any one person very difficult. Hence the ability of an ILE to meet all learners’ needs is questioned. The recognition of the complexity of these co-occurrences is seen as being even less understood within HEIs than single SpLD diagnoses such as dyspraxia or dyslexia. The majority of respondents, in meeting co-occurrence, report considerable experience in ‘untangling’ the various and many interactions between the different aspects of the spectrum.

Socio-emotional and mental health issues

Respondents feel that some socio-emotional and mental health aspects of SpLDs will still remain despite ILEs, mentioning that people with SpLDs frequently possess low self-esteem, low self-belief and high anxiety levels. Additionally, they note that some SpLDs cause problems in social interactions. Respondents worry that, without effective pastoral care, these issues progress to being ‘full-blown’ medical problems. Respondents suggest that supporting such issues sufficiently early can reduce future health system costs. To the extent that an ILE might enable SpLD students to access their learning more effectively, without engaging in the long, complex and stressful application process which ultimately results in DSA, socio-emotional issues and mental health problems might be reduced or avoided.

Metacognition

Respondents comment that learners benefit from knowledge of the way they learn. They identify that this knowledge could cover the learner’s strengths and weaknesses, understanding how different strategies and techniques operate to know which work best, what teaching methods work best and awareness of attention span. A number of respondents refer to the current support model which requires a diagnosis of an SpLD before DSA is awarded; they report that these diagnostic reports, appropriately explained to

learners, often result in positive change in learners' attitudes as they now possess an explanation for their difficulties.

Transition into university

Respondents' comment that SpLD learners, entering HE either directly from school or in later life, can be doubly disadvantaged if their prior educational experiences were poor. Respondents worry that an ILE might not be able to support these learners. As one respondent stated, "if they are behind at the beginning they will fall further and further behind as they go on". Respondents also suggest that, for those previously attending a highly supportive school, the transition to an ILE could be difficult if the ILE support level were significantly different. Respondents clearly suggest that whatever ILE is implemented it will need to 'reach out' actively to SpLD students.

Accessible assessment formats

Diagnoses of SpLDs frequently recommend 25% extra time in examinations to compensate for such issues as slow processing, slower comprehension, reduced working memory. In addition, at some HEIs, SpLD learners written work is not assessed, for example, for spelling. Against this background, respondents question whether, within an ILE, existing assessment methods represent the best way of assessing understanding. Two respondents report progress with alternatives to written format assessment, even in a traditional subject with a long history of written submissions. Respondents also mention that the timed nature of exams can sufficiently increase levels of SpLD learners' anxiety such that they underperform.

Generally, respondents worry that assessment formats might be used more out of habit than because they are effective at testing knowledge. Respondents, however, acknowledge that in certain 'fitness to practice' assessments, time constraints and format might need to be more specified and less flexible.

Barriers to an ILE

Eight main themes emerge regarding barriers to ILE implementation, comprising, in order of number of mentions:

1. Need for and extent of training.
2. Academic staff attitude.
3. Financial resources.
4. Time availability.
5. Need to work cross-functionally and use all internal resources.
6. Need for leadership.
7. Challenge of creating inclusive courses.
8. Facilities constraints.

Based on their own individual concept of ILEs, respondents assume that much of the responsibility and workload for the design, implementation and delivery of an ILE will lie with the academic staff themselves and their leadership.

Need for and extent of training

Respondents recognise that all staff in an HEI, particularly the academic, would need training across a range of disability aspects. Respondents have first-hand experience of the length of time and effort required to build a thorough understanding of both the impact of SpLDs on study and the effective ways to support learners with SpLDs. Respondents also note, see below, that HEIs may not currently be using their own in-house expertise

effectively to train academic staff and others to develop an inclusive environment. The issue of visiting and guest lecturers also exists; the extent to which their teaching might be inclusive is also an issue to be solved.

Academic staff attitude

Respondents identify a number of sub-elements within the category of academic staff's attitude towards inclusivity in general and SpLDs in particular, suggesting that it can sometimes be very negative.

This suggestion is potentially contentious, however, it seems clear that respondents base their statements on their experiences of working with some academic staff. Respondents feel that whilst most academic staff are at least willing to listen to discussions about the nature of SpLDs and their impact on studies, they encounter a, not insignificant, number of academics who are sceptical about the existence of SpLDs, to the point of denial.

Respondents feel that these academics could prove divisive in implementing an ILE.

Respondents identify a more general lack of empathy leading to a lack of desire to teach inclusively for two apparent reasons; first, academics' belief that they are employed to teach rather than pursue an inclusivity agenda, despite the widening of participation to which their HEI might subscribe. Second, respondents feel that some academics believe that easing difficulties in learning might equate to a 'dumbing down' of academic rigour. Numerous respondents report that they feel disempowered by their own line management, or their department's position in the HEI structure, to challenge their academic colleagues.

Financial resources

Respondents identify financial resources as vital to achieving an ILE, suggesting that their lack could be a major stumbling block. Respondents' underlying assumption is that existing staffing and material resources will be insufficient to cover development of an ILE; this seems a fair supposition given that academics are already charged with a heavy burden of research, due to, for example, the Research Excellence Framework (HEFCE, 2014) plus teaching and the proposed Teaching Excellence Framework (BIS, 2015), which begs the question as to whether HEIs would actually reallocate budget from elsewhere to develop inclusivity or acquire new financial resource to fund ILE development. As some respondents question HEIs' leadership commitment, see below, their responses suggest that the former seems unlikely and, in an era of austerity, the latter is in doubt. Indeed, one respondent comments on current reductions in the disability premium and maintenance grants, illustrating the pressures upon disability delivery teams.

Time availability

Respondents identify a number of, potentially irreconcilable, elements regarding the time required to develop an ILE. They see that implementing ILEs from concept to operation will require very significant amounts of academics' time, simultaneously noting that academics' time is already fully allocated. This conflict is more worrisome for respondents as the implementation date for current DSA changes is a mere one year away and, in the respondents' view at least, HEIs have not in the past demonstrated agility for such major change within similar timescales.

Need to work cross-functionally and use qualified internal resources

Respondents identify two aspects to this barrier. First, whilst HEIs possess in-house experts in the field of inclusivity they do not use this expertise effectively. Second, respondents observe issues with the consequences of decisions.

If HEIs wish to pursue an ILE agenda, they will need to identify the required changes and implement these to move from their current positions to their future positions of greater accessibility. Respondents note that HEIs have three choices in that 'journey'. Management can assume it knows what it needs to do and implement those changes, or it can buy-in proven expertise, assuming expertise exist and is purchasable, to implement those changes, or it can ask its own qualified, existing in-house resource to provide the input. Respondents express the fervent wish, that the last option is taken, however, many fear the first might be a common route.

Need for leadership

Respondents recognise that an ILE environment requires change right across an HEI and that such extensive actions can only be driven successfully 'top down'. Respondents are very concerned about the timescales within which ILEs have to be implemented in order to accommodate reduced DSA funding. They identify existing disabilities support teams being frustrated in having to push hard through an HEI's hierarchy, entrenched positions, lack of trust and general slowness in response to change in order to gain attention for managing the consequences of that reduction. Some comment that HEIs are faced with significant change elsewhere in their organisations; disabilities support teams therefore need senior management's guidance as regards priorities. The observation is also made that the Equality Act (UK Government, 2010) which places a duty on HEIs to make reasonable adjustments (BIS, 2014) and which also provides part of the rationale for the changes to DSA, has weak powers of enforcement which provide no additional incentives to HEIs for action.

In a constructiveness spirit, numerous respondents see an HEI's top management as holding the key to success in implementing an ILE.

Challenge of creating inclusive courses

Respondents are acutely aware of the challenge involved in creating inclusive courses because they see daily SpLD students who are struggling with their academic work, existing course materials and teaching methods. Respondents, in their one-to-ones specialist tutorials already work with existing materials to develop strategies and techniques for their students to use to make those existing teaching materials and methods more accessible. The major element of the challenge for HEIs may prove to be in anticipating how existing courses might cause detriment to Equality Act (UK Government, 2010) protected groups, for example those with SpLDs, and then proactively redesigning those courses to remove such issues.

Facilities constraints

Respondents identify a number of facilities constraints which can affect learners with SpLDs and co-occurring issues. As with almost all the barriers noted by respondents, removing these facilities constraints ultimately comes down to cost and the extent to which an HEI views the cost-benefit equation for what might help only a minority of students, albeit whilst ensuring compliance with the Equality Act (UK Government, 2010).

Conclusion

This study demonstrates that practitioners supporting SpLD HE learners view the idea of an Inclusive Learning Environment very favourably as regards the potential for responding to their learners' needs. They envisage that ILEs could also benefit the wider student population by allowing sharing of good practice developed for those with learning difficulties. However, whilst the promise of ILEs exists, practitioners are unsure as to both their theoretical and practical nature. Practitioners are unable to point to a model or models which are implemented and from which reliable evidence can be reviewed.

To an extent, responses in this study resemble a 'shopping list' of desirable ILE characteristics, however practical constraints to their achievement exist. Foremost of these lie in the workload and training imposed on academic staff, academic staff's willingness to embrace inclusivity, an HEI's leadership's ability to use all the expertise at its disposal and financial resources in an age of austerity.

Whilst this study did not explicitly investigate each HEI's progress towards an ILE, the respondents' wide exposure to HEIs indicate that HEIs are moving at different speeds and to different extents. Reaching the 'destination' of an ILE will therefore occur at a range of times to a variety of degrees in different HEIs, potentially leading to inconsistencies across the HE sector.

ILEs, according to respondents, do hold out the possibility of improving the support available to learners with SpLDs. However, the unique learning profile of each person with an SpLD, their need to learn and overlearn at their own pace, their comparative slowness against their peers in certain tasks seriously challenges the idea of a standardised ILE sufficiently helping with the complex interactions of SpLDs and studies to deliver a significant reduction in the requirement for patient, skilled one-to-one specialist support.

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Abbreviations

ADHD	Attention Deficit Hyperactivity Disorder
ADSHE	Association of Dyslexia Specialists in Higher Education
ASD	Autism Spectrum Disorder
AT	Assistive Technology
DSA	Disabled Students' Allowances
EA	Equality Act, 2010
HE	Higher Education
HEI	Higher Education Institution
ILE	Inclusive Learning Environment
NADP	National Association of Disabilities Practitioners
SpLD/SpLDs	Specific Learning Difficulty/ies
VLE	Virtual learning Environment