

### Stories of resilience: Learning from adult students' experiences of studying with dyslexia in tertiary education

Margaret Wilson & Natalie Savery

#### Abstract

Stories from adult students with dyslexia are not widely heard in Aotearoa/New Zealand. While working alongside students with dyslexia we have gained access to some powerful stories of struggle and triumph. Our own practices, as a learning development lecturer and a literacy advisor, have been challenged by what we heard and this has prompted us to investigate dyslexia and the discourses that are associated with it in more depth. In order to learn more we interviewed four students about their study journeys, and asked them to identify what lecturers did or could do to make learning easier. Using a narrative analysis approach we identified five clear themes: resilience (these students were studying successfully); the positive impact of identification; the importance of self-awareness; implementation of compensatory strategies; and, the positive consequences of being open about dyslexia in terms of receiving institutional assistance and accessing support in the learning environment, for example, assistive technologies. Recommendations are also made about what lecturers can do to make learning easier for students with dyslexia.

**Keywords:** dyslexia; resilience; compensatory strategies; tertiary; neurodiversity; learning differences; narrative analysis.

#### Stories of resilience: Adult students talking about studying with dyslexia

In order to improve awareness of dyslexia and to promote a strengths based psycho-social model, we, a learning development lecturer and a faculty-based literacy advisor, ran several Dyslexia Awareness workshops at our urban tertiary institution in Aotearoa/New Zealand. We provided research findings about dyslexia, we created activities which sought to mirror the experience of study with dyslexia, and we elicited the participants' knowledge of working with students with dyslexia. But by far the most powerful element of the workshops were the stories told by the students themselves. The personal narratives of these students provided unmediated insights into their past and present triumphs and struggles to negotiate academic study.

We soon realised that stories beget stories. Once the powerful potential of the students' experiential discourse was clear to us, we set out to record more stories for research purposes. After interviewing four students we used narrative analysis to discover themes and hypotheses which emerged from the data (Bruner, 2004). This is the story that follows. But it is only one of the ongoing stories. A participant in the study agreed to have his video-taped interview placed on the learning management system at our institution—so he continues to tell his own story every time someone clicks on the link. The video has also sparked more stories as students and colleagues at our institution give us feedback and tell of their experiences in the classroom or about their own or their children's journeys with dyslexia.

Finally, we hope that this article will challenge other stories that may be shaping people's current awareness of the perplexing and intriguing phenomenon of dyslexia.

#### The presence of dyslexia and policy in New Zealand

Although there are no precise figures for the number of individuals with dyslexia in tertiary study in Aotearoa/New Zealand, Chapman, Tunmer, and Allen (2003) and the Ministry of Education (2006) estimate that approximately 7 percent of the general population of New Zealanders are affected by it. By way of comparison, dyslexia was "[the most commonly] self-declared disability in higher education in the UK" (Mortimore & Crozier, 2006). In Aotearoa/New Zealand educational institutions have obligations under the New Zealand Public Health and Disability Act 2000, and are expected to comply with the Tertiary Education Commission's Kia Ōrite Achieving Equity: New Zealand Code of Practice for an Inclusive Tertiary Environment for Students with Impairments (2004). In reality support is not provided consistently, and there is a lack of help for students and knowledge about dyslexia in Aotearoa/New Zealand (Marshall, 2005; Rowan, 2010).

#### Definitions of and discourses around dyslexia

The story of how dyslexia is understood and defined is confused and contentious. It was first referred to by Pringle Morgan in 1896, and much of his original description of a teenage English boy is still found in current descriptions of dyslexia. There was a discrepancy between the boy's ability and his actual achievement; Morgan's approach was a medical one; and, a hereditary element was suggested (Pollak, 2005). The current debate surrounding dyslexia continues to be heavily influenced by this medical model. However, there are many competing definitions which differ according to the perspective from which it is viewed. Many of the definitions are based on a deficit model which defines the person with dyslexia in terms of what he or she cannot do. It is perhaps not surprising that so many people with dyslexia have been, and continue to be, reluctant to disclose their learning difference. The British Dyslexia Association's (BDA) 2007 definition seen below is an example of the medical approach:

*Dyslexia is a specific learning difficulty which mainly affects the development of literacy and language-related skills. It is likely to be present at birth and to be lifelong in its effects. It is characterised by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual's other cognitive abilities. It tends to be resistant to conventional teaching methods, but its effects can be mitigated by appropriately specific intervention, including the application of information technology and supportive counselling.*

This definition is useful for identifying difficulties faced by people with dyslexia. The process of identification of dyslexia is widely recognised as an important step towards developing self-awareness and strategies for dealing with the demands of a literate world (Orenstein, 2001; Pollak, 2005; Tanner, 2009). Nevertheless, the BDA's definition locates

the problem in the individual and does not address the role that a society plays in constructing 'disabilities'.

In contrast to the medical discourse, social constructionists assert that it is the social context which determines whether dyslexia is seen as a disability or not (Herrington, 2001a; Herrington, 2001b; Pollak, 2005; Reid & Valle, 2004,). According to Reid and Valle (2004), "learning difficulties are not objective fact; they are historically and culturally determined" (p. 466). Similarly, MacDonald, in his social model of dyslexia, shifts the focus from the individual's limitations to "problems caused by a disabling environment" (2009b, p. 349). In tertiary institutions one need not look far for examples of how the environment can be disabling. These are places with high-literacy-demand situations (Riddick, Sterling, Farmer, & Morgan, 1999) within which, for example, written assessment can be "an obstacle to learning in itself" for students with dyslexia (Chanock, 2007-2008, p. 22).

British educator Neil MacKay (2009) defines dyslexia from a strengths based perspective as being "a specific learning difference which may cause unexpected difficulties, at any given level of ability, in the acquisition of certain basic skills". Rather than seeing dyslexia as a difficulty, MacKay frames it as a difference or a learning preference. Similarly, Pollak (2009) and Cooper (2009) class dyslexia (and other types of brains that are commonly associated with "specific learning difficulties") as "neurodiversity". Cooper (2009), who has dyslexia, argues that:

*dyslexia is an experience that arises out of natural human diversity on the one hand and a world on the other where the early learning of literacy, and good personal organization and working memory is mistakenly used as a marker of 'intelligence'. The problem here is seeing difference incorrectly as 'deficit'. (p. 66)*

The website "Best Resources for Achievement and Intervention re Neurodiversity in Higher Education" has a similar approach. Its author asserts that neurodiverse learners are holistic thinkers who rely on imagination as opposed to sequential processing of information, and concludes that such learners are at a disadvantage in an educational environment that privileges linear thought (BRIANHE, 2009).

An experiential discourse of dyslexia which has the person with dyslexia's voice at its centre can be found increasingly in the literature (Chanock, 2007; Marshall, 2005; Pollak, 2005; Rowan, 2010; Tamer, 2009). These authors claim that it is the voices of those with dyslexia that can tell us how they learn most effectively and in what ways their learning difference affects their lives (Herrington, 2001a; 2001b; McNulty, 2003; Pollak, 2005). Psychosocial aspects of learning with dyslexia are a gap in the literature (Ingesson, 2007; McNulty 2003; Nalavany, Carawan, & Rennick, 2011). Nalavany et al., who are interested in studying the subjective psychosocial experiences of adults with dyslexia, call for researchers to identify the factors that create risk and resilience in order to help them "approach life from a strengths perspective and weigh risks with self-knowledge" (2011, p. 76).

By combining an experiential discourse of dyslexia gained from interviewing four students with a narrative analysis, this is what we sought to do. Moreover, we wish to inform tertiary educators so that they can better meet the needs of students with dyslexia.

### Methodology

A narrative analysis of the stories of these four students studying at a bachelor's degree level was chosen as an appropriate research method (Bruner, 2004; Kohler Reissman, 2008; Marshall, 2005; Richmond, 2002). In this approach, "the researcher's role is to learn from people, rather than simply studying them" (Goldberg, Higgins, Raskind, & Herrman, 2003, p. 222). Marshall (2005, p. 40) has said that a narrative approach provides "a means to make sense of life as it is lived", one where "diverse and chaotic life events and experiences are brought together and synthesized into an ordered narrative format". Narratives enable the construction of a person's identity and can be transformative because the narrator makes sense of negative life events (Kohler Reissman, 2008; Marshall, 2005; Richmond, 2002). Narrative analysis also "allows topics and voices to be included that might otherwise be missing" (Kohler Reissman, 2008, p. 80).

Ethics approval for the research project was obtained from the institution's ethics committee. We tried to recruit participants through our own networks and the Disabilities Liaison Centre initially. In the end it was only through existing relationships with students and lecturers that we were able to find four students, all with official identification of dyslexia, who were interested in sharing their stories. We realise that the participants' choice to take part in the research might have been influenced by the fact that we had worked with them previously to achieve their study goals. However, this did not seem to have influenced the narratives that emerged. While four participants is a small number our belief was that it was not the number of interviews but the depth and richness of those interviews that mattered (Sandelowski, 1994, as cited in Marshall, 2005).

The one-to-one conversations were between 15 and 25 minutes long; three of the interviews were video recorded and one was audio recorded. The participants are described in the table below.

Sex	Age	Course and year of study	Ethnicity
Male	19	Bachelor of Communications Year one	European
Male	17	Bachelor of Nursing Year one	European
Female	40	Bachelor of Design and Visual Arts Year two	European
Male	31	Masters of Osteopathy Year one	European

Table 1: Details of participants

Each interview began by asking the student to describe his or her experience of studying with dyslexia and to include any actions taken by lecturers that helped learning. As interviewees we sought to intervene as little as possible, yet we were fully aware of being actively engaged with the interviewee in the joint construction of the story and its significance (Kohler Riessman, 2008). By using statements rather than a question and answer procedure to elicit the students' stories, we hoped to minimise the power that we as the interviewers inevitably held (Kohler Riessman, 2008). Interviews were transcribed and checked for accuracy subsequently both by the interviewees and the interviewees.

#### Data analysis

In order to analyse the data we constructed a narrative analysis framework based on Kohler Riessman (2008) to investigate thematic and structural patterns and to analyse language choices (see Appendix 1). This research tool enabled us to focus in depth on each narrator's story in an effort to understand the participants' perceptions and interpretations. Although each story was analysed with this same framework, not every story contained examples of each narrative component. With no pre-determined outcomes or manipulation of the research setting, we sought to "discover theories and hypotheses that emerg[ed] from the data" (Goldberg et al., 2003, p.224). Unlike quantitative research where findings are considered reliable if they can be replicated, this qualitative data is deemed credible because it provides rich and full evidence of what the research project was aiming to achieve (Stainback & Stainback, 1988). Kohler Riessman frames the qualitative research approach to validity in terms of the 'trustworthiness' of the stories that are collected and the analysis that is derived from them (2008). She goes on to describe narrative truths as "always partial—committed and incomplete" (2008, p. 186). However, by detailing our methodology, ethical considerations, and our theoretical influences, as well as aligning our analysis of the data with relevant literature, we aim to convince the reader of the trustworthiness of this study.

#### The stories of resilience

The stories of these students with dyslexia indicated that, despite both past and present literacy and learning differences, currently they are engaged successfully in study at our institution. Narrative analysis of each individual story and across the stories—thematically, structurally, and through examination of their linguistic choices—highlighted a journey of struggle within an academic environment that renders their neurodiversity a disability (Chanock, 2007; MacDonald, 2009b; Pollak, 2005; 2009; Rowan, 2010). The overarching theme of all four students' stories was one of personal resilience and resourcefulness to overcome academic learning challenges. However, definitions of resilience vary. Doll and Lyon (1998) in their review of risk and resilience factors for school children define resilience, for example, as "successfully coping with or overcoming risk and adversity or the development of competence in the face of severe stress and hardship" (p. 348). These four stories of perseverance, to overcome adversity and hardship in the learning environment, described resilience for us.

The language choices the students made when describing their learning experiences to us included words such as "hard", "a struggle", "degrading", "humiliated", each of which emphasised the socio-emotional impact of learning with dyslexia for these participants. The potentially traumatic experiences of learning with dyslexia, especially in the primary school years, are congruent with the extant literature in this field (Ingesson, 2007; McNulty, 2003; Nalvany et al., 2011; Stampoltzis & Polychronopoulou, 2009). Negative school experiences can impact on self-esteem, especially in relation to feelings of scholastic competence (Riddick et al., 1999; Terras, Thompson, & Minnis, 2009). The Bachelor of Design student used polarity to describe the resilience and perseverance she required in order to overcome learning differences:

*... I am very slow reader and a very slow writer and I had problems putting my ideas into working memory... it's really stuffed up my life actually, but in ways it did and in some ways it made me quite resilient and really determined.*

Similarly, the Master of Osteopathy student highlighted the paradox of his learning experiences in the tertiary environment:

*The last 28 years has been a bloody struggle and it has been a struggle for a reason, and the reason is not that I am thick or slow, or an underachiever... but just my brain works in different ways.....So overall it has been up and it has been down having dyslexia, and I am adamant that without it I wouldn't have been confident and I wouldn't have had a career in personal training...I definitely did not see myself completing a three-year Bachelor's [degree] and entering a Master's....I am doing it only because I like a challenge, and yes, I am definitely pushing against, I am doing something so unnatural learning wise...*

All four students described perseverance to us in terms of having to work harder and requiring more time than their peers to achieve success. Identifying hard work and internal motivation as factors driving success is congruent with the findings of Rowan (2010) in her study of Aotearoa/New Zealand secondary school experiences of students with dyslexia now in tertiary study. The Bachelor of Communication student explained that:

*It's something that makes learning [a] little bit hard for me, but at the same time I feel, when I get good marks, quite good about it, because I have actually worked quite hard for that...*

Similarly, the Master of Osteopathy student's story described the disparity in terms of time and effort required for success in his tertiary studies in the following way:

*...and I managed to squeeze out an A in one of those couple of years of study, and that boosted my confidence, and I felt relatively nearly normal. But I worked ten times harder on that A than any other student in my class.*

### The power of identification

The theme of having difference identified was common across the stories of resilience that all four learners shared with us. Our structural analysis of the participants' narratives across a temporal dimension suggested that the dyslexia assessment was a key turning point towards success in their learning journeys. Prior to assessment three of the four students described a feeling of "disparity", of feeling different or not "normal" within the learning environment. These students made unfavourable comparisons between their own learning abilities and that of their peers. Feelings of difference, especially prior to diagnosis in these stories, are consistent with other stories of difference; for example, that of McNulty (2003), the findings of Pollak's (2004) study of 32 higher education students, and Stampoltzis and Polychronopoulou's (2009) study of Greek university students with dyslexia. Prior to assessment, learning within the stories was couched along a continuum of difficulty from "battle" or "struggle" to "hard" or "slow" for all four of our learners.

The Master of Osteopathy student described his feelings of disparity at primary school as follows:

*I just knew I was not as good as the rest of them and so I had to do extra reading for half an hour and it was painful. Reading was very hard, very slow, and I did not think much except that I wasn't on par to the other kids.*

The golfing metaphor of not being "on par" used by this student described the difference he perceived in his story of learning at primary school. The Bachelor of Nursing student also highlighted the discrepancy between his verbal intelligence and his academic achievement, stating that:

*... because I was passing a lot, I didn't get picked up. But it's like a teacher looked at where I was academically on paper and what she was seeing when she was speaking to me, the types of things I was saying... looking for a mismatch between where they are achieving and where you expect them to be achieving...so that just because they are passing, they are not necessarily reaching their potential...*

During their primary and secondary school years, differences in literacy achievement evident in their stories, especially in relation to reading, spelling, handwriting and test taking, exacerbated the disparity between the four students with dyslexia and their peer group. In contrast, at the tertiary level it was difficulties predominantly with writing, especially fluency and automaticity of written expression, rather than reading difficulties that posed the greatest challenge for all four participants. Similarly to these four stories, in their study of 16 university students with dyslexia Riddick et al. (1999) reported that dyslexic learners felt more anxious and less competent in their written work at university than did the control group. The range of writing difficulties described to us by the four students related to essay writing, note-taking and, in particular, to theory courses. The four participants outlined their individual difficulties across the components of writing: spelling, vocabulary usage, grammar and punctuation, coherence and cohesion, and sentence and essay structures. In addition to literacy differences, their stories also described cognitive differences relating to learning such

as differences in information processing, including the challenges of linear, sequential, thinking for writing, as well as memory, attentional, and organizational differences. The Master of Osteopathy student's story related the frustration he experienced with academic writing at tertiary level in the following way:

*So in the first year there was a lot of punching bags and punching beds letting out a lot of frustration and was mainly for me over essays and writing. And this is one thing about dyslexia is that I can conceptualise the whole concept of whatever it is you want me to write about, whether it is anatomy or physiology or a story, and I can visualize it, close my eyes and visualize the whole thing, what I'm trying to say....so I rush and start to write it out and it can't come out, it can't come out with academic words nice and flowing and concise, and I would write it out and it would be a jumble mess. Have got it all over there, but it is a big, big mess, and because it feels like a mess, you get frustrated.*

Likewise the Bachelor of Communication student described his perception of his academic writing that was not "up to standard" in the tertiary environment:

*... just my spelling, grammar, punctuation is really what's off level. I often construct my sentences far too long, and I actually just can't see that. So I actually have to sit down with someone, edit my work, otherwise it just doesn't, isn't up to standard. I've got the ideas there. I just can't put it down on paper in the correct format ...*

In the following excerpt from her story, the Bachelor of Design student referred to the stress she felt prior to her dyslexia assessment as an adult (aged 40) and the relief she felt on having her learning difference identified.

*So I got assessed and that was quite stressful, because I was thinking, what if I am not dyslexic? What if it just said I was dumb? .....and when I got tested and was really stressed out [about] what the result was going to be, but what I had found since being assessed is that it has actually really helped me, and that now I know what I know, black and white, what I am not good at and I don't have to think.. oh.. it doesn't add up. I know that I'm really good at visual manipulation and spatial manipulation and it's really good to know that I am good at something, even though I'm average in everything else, really low at three. At least I kind of know, it's been identified. I know exactly what I have to work on ...*

All four of the participants' stories described their identification of dyslexia in positive terms. In addition, three of the four students' stories highlighted identification as a pivotal moment in their learning journeys that resulted in new understandings and increased self-awareness of their individual learning differences. Comparing and contrasting the learners' stories according to age of assessment suggested to us that earlier identification of dyslexia in the lifespan reduced the period of "struggle" or "battle" within their learning stories. We noticed that the degree of difficulty described was significantly less evident in the stories of the two younger students who were diagnosed prior to entering tertiary study.

This finding bodes well for future students with dyslexia who are more likely to enter the tertiary learning environment with their learning differences identified. The importance of early identification of dyslexia and intervention aligns with the findings of studies by Ingesson (2007) and Terras et al. (2009). Descriptions of the positive power of identification of difference for these students confirmed a “labeling” approach to dyslexia as argued in the literature (MacDonald, 2009a). In contrast to perceiving ‘labeling’ as stigmatizing, identification (which includes an extensive report written by an educational psychologist describing an individual’s strengths and weaknesses) enabled these four students to access support in the learning environment, and to gain enhanced understanding of their unique individual learning differences.

### Identifying and working with individual strengths

Working with individual strengths was a key thematic element in these stories of learning with dyslexia in the tertiary environment. In particular it was the ability of all four students to identify and work with their strengths, including selecting a programme of study that drew on their strengths, that suggested reasons for their success in tertiary study. Other stories of learning with differences also suggest that successful goal-setting — especially appropriate course selection and realistic employment aims or “niche-picking” — are crucial in contributing to future success (Goldberg et al., 2003; McNulty, 2003). Developing a strengths perspective was evident in the story of the Bachelor of Design student above, who was working with her strengths of visual and spatial manipulation. The personal strengths described in the participants’ stories included spatial awareness or spatial manipulation, working with visual strengths, practical hands-on strengths, verbal strengths, and the benefits of holistic, conceptual, thinking.

The students’ stories suggested that their understanding of dyslexia, and working with strengths, had increased their acceptance of their individual learning differences. Working with strengths as a success factor for students with dyslexia is consistent with similar findings in the stories by Nalavany et al. (2011) of adults with dyslexia. Increased acceptance, self-awareness, and perseverance are also examples of “success attributes” for individuals with learning disabilities as found by Goldberg et al. (2003). Nalavany et al. (2011) suggested that “adults with dyslexia may have varying strengths and risk factors, which lead to more or less resiliency. It is important to identify the common threads found throughout their lives that can assist or hinder success” (p. 76). The Master of Osteopathy student’s story described his experience of working from a strengths perspective, and also demonstrated eloquently how he has framed dyslexia as an “absolute strength” in his learning story:

... You can’t just be academic in what I’m doing, you[‘ve] got to be practical with hands on... and you got to have a good clinical reasoning, and you got to be a good communicator to run your business, so it’s a holistic approach.....so this is sort of where dyslexia has blessed me. If I was just academic I wouldn’t have the practical side of it, wouldn’t be able to play basket ball, tennis, touch rugby, wouldn’t be able

to do all that. Because, that’s my strength, my strength was spatial awareness, that I can be very good with my hands and my body, and figure out what’s gonna work out, and what feels good, and so dyslexia is an absolute strength, and if I did not have dyslexia I wouldn’t have been on my way to be a confident osteo. It has been a struggle, but the earlier you know about that the better it is, because that is when you can start putting procedures in place of how you learn, and what’s the best way to learn ...

### Implementing compensatory strategies

An additional thematic element within the students’ personal narratives depicted the ways in which they utilised awareness of their personal strengths to implement effective compensatory strategies. A high level of resourcefulness was illustrated in the stories as the students identified and implemented compensatory strategies autonomously to navigate the tertiary environment. Riddick (2003) has explained that compensatory strategies can be used as coping mechanisms for individuals with dyslexia in their current teaching and learning environment. Compensatory strategies described by the four participants’ stories included: strengths relating to visual memory for learning and processing information; using verbal strengths to improve assessment outcomes; and accessing prior knowledge gained through practical experience. The Master of Osteopathy student also noticed that his auditory learning preferences were a personal strength, and outlined how lecturers could use auditory strategies such as explanation, summarization, and repetition of key ideas, and pronunciation of new terminology, to aid learning and retention. In his story he argued that:

... repetition is really good as you all know. Hearing something once it is like a Teflon, it goes on and phish slides off, but if you hear it two or three times it is like Velcro, it sort of sits in your brain and you will get it... but if you have got those key points and you do repetition on the key points, that really helps ... Just on that, new words, new words are horrible for me, new words that I haven’t seen before. If you don’t pronounce them as a lecturer, then I can’t pronounce them, and pronounce them clearly and with repetition, that would be perfect, that would help a dyslexia ...

The personal strengths across a range of individual learning styles described within the four students’ stories suggested that multisensory approaches could be effective and inclusive teaching and learning approaches for use in the tertiary environment. Their stories that described skills and strengths in areas other than written communication highlighted the need for inclusion of alternative forms of assessment to the written essay. Alternative mediums of assessment could include visual, oral, creative, or practical assessments. This finding supports Chanock’s (2007/8) call for a more inclusive approach to teaching to be adopted, one that offers alternative forms of learning than through writing, and for forms of assessment other than the written essay to be utilised. The Bachelor of Communication student’s story explained how he utilised his strong verbal skills to achieve higher assessment outcomes:

*But I guess having issues with writing, I've just tried to build up my other skills so when it does come to that [assessment] I can, if there's another option, I will take it. Because I can still get all my knowledge across through talking and presentation ...*

Within their stories three of the four participants described how they use visual strengths to assist learning and memory. The recurring theme of visual strengths as an aid for learning was depicted in the stories through the use of word repetition, description, and examples of different visual imaging techniques the students employed, and by means of anecdotes of visualization strategies in specific learning situations. The Bachelor of Nursing student's story contained rich detail relating to his use of visual compensatory strategies for learning anatomy and physiology, especially as memorisation strategies, with the key words "picture/s", "visual", and "see" being repeated numerous times in his narrative. His description suggested the effectiveness of visualization as a cognitive learning strategy, especially when linked to practical prior experiences to which students can connect new learning:

*... it definitely gives you the edge, of being able to flick back, of almost having a photographic memory of being able to flick back, and just go it was like that instantly, really helps. I mean, some people might see something in one dimension, but a dyslexic who can see something in 3D and turn it around in their mind, it would take thousands of words to describe a picture in someone's mind, but the dyslexic person sees the picture and as it's manipulating, can turn it around and change it ... and when we're talking in class, I'll get similar to like flashbacks of patients that I've treated and how they looked ... and I can flick back to a patient I had on the bus ... and just remembering his colour, what his skin felt like ... those kind of things really does help you in your future [nursing] care.*

#### Utilizing support and technologies in the learning environment

The final key theme in all four students' stories of resilience was their confidence and openness to disclose their learning differences to tutors and learning support staff, in order to gain increased learning support during their tertiary studies. Similar stories of the benefits of disclosure for accessing academic support services were found by Pollak (2004). In contrast, research findings by Riddick (2003), Child and Langford (2011), and by Stampoltzis and Polychronopoulou (2009), demonstrated the hidden nature of dyslexia with the majority of participants choosing not to disclose dyslexia. In these three studies, the reasons students provided for failing to disclose dyslexia included fear, stigmatization, negative attitudes, and the lack of provision of academic support.

The Bachelor of Communication student, who often wore a T-shirt with the slogan "Dyslexics are people too", symbolic of his acceptance and comfort with public disclosure of dyslexia, emphasized the importance of disclosing learning difference in his story:

*the (...) department [I'm studying in] is really supportive. They allow, they will do anything that is possible, as long as you approach. If you are going to be closed about it, you just get frustrated; it is not going to help at all. Obviously, go and put yourself out there, as long as you do, I think all satisfied.*

All four students spoke to us of the support provided by lecturers, learning support advisors, or the disability liaison staff as a factor in their successful learning journeys. This finding is consistent with Goldberg et al. (2003), and with Doll and Lyon's (1998) assertion that schools can provide a caretaking and protective environment that promotes resilience. Doll and Lyon (1998) argued that "schools may represent one of the most potentially protective environments – encouraging the development of problem solving and academic skills, individual talents, and other productive activities, and social competence" (p. 358). In contrast with Stampoltzis and Polychronopoulou (2009), Goldberg et al. (2003) and Rowan (2010), our learners' stories did not highlight the role of peer or parental support as key factors in their tertiary learning journeys. The learning stories of all four students demonstrated a high degree of self-awareness of cognitive and learning abilities, as well as autonomy, and a high level of independent development of compensatory strategies.

Three of the four participants discussed the effectiveness of utilising assistive technologies to aid learning. The technologies mentioned in their stories included the use of laptops, assistive software, voice recognition software, and small digital handheld devices for accessing information. Allowing laptops in tertiary classrooms, and providing assistive technologies and software on campus, are key requirements for supporting learning differences in the tertiary education environment. The Bachelor of Nursing student described the benefits of using a laptop in the classroom, and the advantages of small handheld digital devices for accessing information on his tertiary nursing clinical placement:

*... for [my] Year 7 and 8, I was in a laptop class at Tauranga Intermediate. That was a tool that meant the handwriting pressure got taken away and I could focus on doing my work ... it sort of instantly caught me up ... and that's a really important thing to look into, what technology can be used ... a student won't be able to take a big device like a laptop into clinical, but if they have a small device that hides away, pulling something out where they can access all the information that they need: text books, clinical information on-line ...*

Additionally, the need for teacher professional development to increase awareness and understanding of dyslexia in tertiary education is depicted through the learners' stories that contrasted experiences of learning with "helpful, wonderful teachers" compared with stories that described "humiliating", "embarrassing", or "unhelpful" learning experiences. The Bachelor of Design student's story outlined the benefits of teacher empathy, explanation, and one-on-one support as a tertiary level student that contrasted dramatically with her earlier negative learning experiences:

... anyway, what he did for me that I found really brilliant was he sat me down and he showed me what I had to do. Like to explain it, like you have to do this, you have to do this, it was quite kind. He was explaining everything. He was drawing pictures for me and he really just explained it. And I went back a couple of times, and just had a one-on-one help, and he was very... he did not judge me, or get frustrated with me, or anything like that. And I just so appreciated that after having, you know, that bad experience, basically being called thick, which is something I had to deal with my whole life. So I did really well and got an A for that project...

Further teacher professional development at our tertiary institute needs to address both the teaching strategies and delivery styles described in the students' narratives, as well as the socio-emotional aspects of learning with dyslexia for students. The key teaching approaches described in participants' stories included the provision of alternative learning and assessment modes; classroom delivery that makes key points in readings and lectures explicit; terminology teaching using repetition and pronunciation; multisensory learning approaches and activities; and access to assistive software and technologies. The necessity for increased teacher understanding and psychosocial support is congruent with Goldberg et al. (2003), McNulty (2003), and with Nalavany et al.'s (2011) argument for increased holistic support in educational environments and for increased awareness, understanding, and validation of the needs of dyslexic students. As Goldberg et al. (2003) argue, "such attributes as self-awareness, proactivity, perseverance, goal setting, the use of effective social support systems, and emotional coping strategies are more predictive of success than academic skills" (p. 234). A resilience perspective on learning with dyslexia provides a move away from a deficit approach toward factors that increase success for learners (Terras et al., 2009).

#### Limitations

This narrative inquiry research was a small-scale study with only four participants drawn from within one tertiary organization. Whilst the rich descriptive data inherent within their stories informed our understandings of learning with dyslexia within this Aotearoa/New Zealand tertiary environment, these findings do not purport to be generalizable across populations, or across institutions. Dyslexia is a very individualized form of neurodiversity, both in terms of *degree* of difference and *range* of difference across a spectrum of interrelated neurological, cognitive, and psychosocial functions. A recognised identification of dyslexia describes where difference lies for each individual student. All four of the students within the study were from a New Zealand European background, and were from a similar socioeconomic background. Therefore, a wider range of experiences of learning with dyslexia for learners from multicultural backgrounds and from across a range of socioeconomic backgrounds was not represented.

All four of our learners are currently engaged successfully in tertiary study, and were comfortable and confident to share their stories. These four students have all had formal identification of their learning differences. We are aware that there are other learners with dyslexia at our institution who are reluctant to disclose dyslexia, or whose dyslexia remains unidentified. These learners represent the invisible, hidden, nature of learning differences.

Some of these learners may be achieving low levels of academic success, or even be at risk of failing in the learning environment. There are also learners who have withdrawn from their programmes of study because the challenges were too great. This study does not capture the stories of the learning experiences of non-successful tertiary students with dyslexia.

#### Conclusions and intentions

Diversity is a key characteristic of our Aotearoa/New Zealand tertiary learning environments. Therefore understanding neurodiversity in terms of individual difference is essential to providing safe, inclusive, learning environments that cater for diverse student needs. The learning stories of these four participants with dyslexia emphasised the role lecturers can play in creating a learning context that promotes success and resilience for learners with dyslexia. Lecturer understanding and awareness of the needs of learners with dyslexia could reduce stigmatization, thereby enabling these learners to feel safe to disclose and discuss their learning differences.

The inclusion of teaching pedagogies and strategies that facilitate learning for students with dyslexia, as well as additional psychosocial support, are examples of a responsive and inclusive pedagogical approach. The implications for classroom practice include providing flexible, individualized, approaches to teaching and learning centered on student choice and differentiation. Key recommendations explicit within the participants' stories included the provision of learning and assessment across a variety of modes; the inclusion of multisensory learning activities; explicit teaching of key discipline terminology; identification of main points in readings and lectures; and the use of technologies to aid learning in the classroom. These pedagogical practices described within the students' learning stories are implemented relatively easily, and are effective pedagogical practices that are beneficial for all learners.

A policy of holistic support within and across the institute is required to provide professional development for lecturers, access for learners to identification / diagnosis and to assistive technologies, provision of accommodations (such as extra time for exams, allowing the use of a laptop), and alternative assessment modes. It is also crucial to provide academic learning support and access to counseling services necessary for promoting personal wellbeing. We intend to continue to deliver professional development sessions, to raise lecturer awareness of the learning differences students with dyslexia experience, and to promote inclusive teaching practices as depicted within the participants' experiential discourse of dyslexia. We also intend making more learners' digital stories available on our polytechnic's Moodle learning management site. These are powerful, insightful, stories that will further raise awareness of dyslexia. Continued advocacy for understanding and support for learners with dyslexia in order to create a more inclusive tertiary learning environment will be ongoing.

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