Supporting dyslexic trainees in classroom and workplace environments

Full Report

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"Primary ITO has embarked on an ambitious project to identify and assist trainees with dyslexia. Dyslexic trainees will make up at least 10% of our clients. In addition, there will be many primary sector employees who shun training opportunities because of their dyslexia. Primary ITO has determined that becoming dyslexic friendly is a useful way of supporting employees who would normally not take up training."

<div align="right">Primary ITO Newsletter, January 2015</div>

"Most times we will hide in the shadows to avoid being exposed as dyslexic." (Trainee)

"Dyslexia is a real, but often hidden, issue among the farming community" say Conway, Smith, Smith and McElwee (2015), who estimate that one in five rural residents may be affected by the condition, which "usually manifests itself in reading, spelling and arithmetic problems" (p. 3). Over the past three years, the ITO has made steps to support these learners, through mentoring, collaborating with the National Centre of Literacy and Numeracy for Adults (NCLNA), and raising awareness with tutors and training advisers. The current project aims to build on this work by investigating:

1) how trainees with dyslexia can be supported in workplaces and classrooms; and
2) how they can be assisted with the transition between these two environments.

Forty participants from four groups (trainees, tutors, training advisers and employers) were interviewed. This data was analysed to explore:

1) the challenges of dyslexia;
2) the impact of dyslexia on the trainee's learning; and
3) strategies to support the dyslexic trainee in their learning.

FINDINGS

Key findings related to the impact of dyslexia were that trainees were highly influenced by prior learning experiences, which were often not positive, and that most had developed different types of compensatory strategies, including avoidance of problematic tasks. The most significant challenges to learning were the classroom environment, time constraints and assessment requirements.

The training advisers emphasised the value of individual planning conversations with trainees as a way of personalising the learning journey and being proactive about predicting and meeting their needs. However, they also noted the need for more knowledge and training in how to use diagnostic

tools and alternative teaching and learning approaches for greater accessibility by trainees with dyslexia.

Some of the tutors had a good understanding of the challenges of the condition, but still struggled to find a comprehensive toolkit of effective delivery strategies. What they found worked best related to relationship-building through one-to-one tutoring/mentoring sessions, ensuring ample time allocations for tasks and assessments, and making learning material available through a range of options, such as DVDs and online, for subsequent re-viewing.

The employers also demonstrated awareness and acceptance of dyslexia and the types of support the trainee needed to be successful in the job. They identified a number of practical solutions to day-to-day challenges which are itemised in a later section of this report. Together, these findings attest to the ongoing needs of this target learner group, both in the classroom and in the workplace, as well as the strong practices and solid foundation already established by this "dyslexia friendly" ITO (Styles, 2015, p. 24).

OUTPUTS AND RECOMMENDATIONS

There are two main outputs from this project:
1. Based on data collected from the project participants, a guide for trainees, tutors, training advisers and employers outlining strategies to improve learning outcomes for trainees with dyslexia (*Appendix A*);
2. A proposed 'wraparound' support model to guide decision-making about good practice interventions which effectively support trainees with dyslexia (*Appendix B*).

This project has enabled the support model to be visualised and mapped. Previously, a description of how the model can be applied in different contexts to support dyslexic learners had not been articulated. This project has led to further study; beginning 2016 to end 2017, it is an initiative to broaden the number and range of trainees who can benefit from shifts in organisational practices and stakeholder attitudes, also conducted under the auspices of Ako Aotearoa.

Recommendations for future work include that 1) a professional development workshop and 2) a guidebook for tutors are developed; 3) a resource for employers with case studies of workplace successes be developed; and 4) the strengths-based, wraparound support model is further developed to contextualise the work for other education providers. Those four proposed resources would draw on the starting point offered in *Appendix A*. A second platform for this work is the resource by one of

the report authors, Mike Styles (2015), which contains more detailed material about dyslexia, and is delivered as part of Ako Aotearoa's professional development series.

"Dyslexia has been the elephant in the room for a long time. Finding out that they have dyslexia is incredibly empowering for the trainees to be told." (Training adviser)

1.1   DYSLEXIA AND DYSLEXIA RESEARCH

Dyslexia is common. Approximately one in ten people experience dyslexia (Te Kete Ipurangi, n.d.), with a higher prevalence – one in five - in people working in the primary sector (Primary ITO, 2014). Most definitions are very clear that dyslexia is not an indicator of intellectual impairment. As Ritchie (2008) puts it, "*Dyslexia is like a thumb print… [it is] a word used to describe difficulties with language, organisation and short term memory. However, no-one's dyslexia is the same.*" The Ministry of Education (2010) defines dyslexia as:

> Dyslexia is a spectrum of specific learning difficulties and is evident when accurate and/or fluent reading and writing skills, particularly phonological awareness, develop incompletely or with great difficulty. This may include difficulties with one or more of reading, writing, spelling, numeracy, or musical notation. These difficulties are persistent despite access to learning opportunities that are effective and appropriate for most other children… People with dyslexia often develop compensatory strategies and these can disguise their difficulties.

Diagnosing a personalised condition like dyslexia can be problematic, and various screening tests have been developed which seek to differentiate between literacy and numeracy needs, cognitive ability, and dyslexia. Educational psychology assessments can take from 2½ to 3 hours (Dyslexia Association of Ireland, n.d.) with costs of several hundred dollars. A more user-friendly tool is the DAST (Dyslexia Adult Screening Test), which can be carried out to identify strengths and weaknesses. The DAST comprises a total of 10 subtests which emphasise fluency as well as accuracy for example 'Rapid Naming', 'One-Minute Reading' and 'Non-Verbal Reasoning'. The Primary ITO offers the DAST free to all trainees via tutor and training adviser referrals. If a trainee is screened as dyslexic, a support package is put in place (described in more detail in *Appendix B*) which includes:

1. Provision of quality, complete and up-to-date information about dyslexia, including the positive aspects of the condition;
2. Support for the person with dyslexia to accept their condition and acknowledge it publically. This can involve an advocate or coach speaking on their behalf;
3. With the trainee's agreement and involvement, informing all people who are involved in the dyslexic person's life about the condition and how they can best support and work with them;

4. Accessing technological aids to support the dyslexic person. This may involve submitting a funding application to Workbridge (a specialist employment service that works with people with all types of disability, injury or illness) for adaptive technologies, LLN resources or a reader-writer;

5. Accessing a voluntary mentor to provide support in the classroom, during study nights and/or in the workplace.

There is an array of initiatives and interventions available through this growing field of educational research (Brunswick, 2012; Conway et al., 2015). One example is Dyslexia Foundation of New Zealand's '4D Workplace' website, which argues that a dyslexic/atypical way of thinking can bring creative gifts and through these, competitive advantage. The site promotes ICT-led, visually-presented information instead of text, as "dyslexics tend to think in pictures rather than words" (para. 4). Yet while there may be a place for extending the use of graphical computer technologies in the classroom, this is not really a practical solution for most work-based trainees.

As well as digital strategies, other interventions promoted by the Dyslexia Foundation include valuing difference and fostering confidence, presenting information in different and multiple ways, supporting learners' processing and organisational skills (for example, with timers, templates and flow charts), and providing options for learners to express and evidence what they know and what they have learnt (Dyslexia Foundation of New Zealand, n.d.).

An international literature review on dyslexia undertaken by the New Zealand Ministry of Education (2007) identified that research has not been able to identify one type of intervention as better than another for teaching people with dyslexia. The review acknowledges that identification of effective intervention methods for people with dyslexia is a challenging process because every person with dyslexia is different. It further stresses that for interventions to be effective, they need to be focused on individual learner strengths and weaknesses and have the flexibility to change with the needs of the individual. The Ministry's review concludes with a statement:

> Due to the limited number of rigorous research studies carried out in New Zealand, the impact of improving literacy levels of dyslexic New Zealand learners needs to be researched further. The current challenge is to design and undertake rigorous research studies that assess the effectiveness of international findings in a New Zealand setting (Ministry of Education, 2007, p. 10).

Other commentators (Rowan, 2010; Tunmer & Chapman, 2007) agree there is minimal evidence-based literature on how to support dyslexic trainees transitioning between academic settings and the workplace. Studies on dyslexia in the New Zealand context that have been conducted tend to focus on

how to support learners in the academic environment. The research presented in this report offers a contribution to address this gap.

1.2 PRIMARY ITO AS A DYSLEXIA-FRIENDLY ORGANISATION

The Primary ITO is making significant steps to support dyslexic learners, through a number of internal and external support mechanisms. The ITO senior management team recognised the importance of 'walking the talk', that is, if employers and tutors are being encouraged to support dyslexic learners, then the ITO needed to be doing the same for its staff.

The Primary ITO as a dyslexia-friendly organisation has several manifestations, for example, recruitment and interview processes have been adapted; job applicants who identify as dyslexic are no longer required to complete a psychometric test; and there is free dyslexia screening for staff members and their close family. Becoming a dyslexia-friendly organisation has enabled the ITO to respond to the needs of people with dyslexia, work to identify trainees and staff with dyslexia, and work to make them feel fully welcome within Primary ITO.

1.3   PROJECT AIMS

The project had two key aims:
1. To investigate how the Primary ITO can support trainees with dyslexia complete their qualification; and
2. To identify strategies which help them transition between the classroom environment and the workplace setting.

Two linked intentions were related to future project work. First, participants' feedback about the challenges and enablers of coping with dyslexia as outlined in this report (summarised in *Appendix A*) would be used to further develop the Primary ITO's preliminary 5-Step Wraparound Dyslexia Support model (*Appendix B*). The model was developed in 2014 in response to feedback and other observations from the Primary sector that dyslexia was a significant issue for trainees. It provides a process-oriented guideline for screening for dyslexia and assists key stakeholders in making decisions about the most effective support approaches. It is hoped that future iterations will continue to add detail and provide a resource which can, in time, be used by other ITO providers.

A second intention was to establish the platform for future project work to develop a series of dyslexia support packages for trainees, employers and tutors with a wider scope and greater opportunity for measuring impact and shifts in practice.

2. METHOD

One of the intended activities of the project was to trial a range of dyslexia support interventions with trainees over a six-month period using action research methodology. It became apparent early in the data collection phase that this was a pre-emptive aim as the project team needed to firstly investigate, through interviewing, what interventions and resources were already being implemented to support trainees in the classroom and/or the workplace.

Interim findings from the interviews with the trainees, employers and tutors has identified that some tools are being used to help them. These include a reader-writer in the classroom, mentoring support from a volunteer mentor provided through the Primary ITO and technologies such as a smart pen, Dragon Voice to Text software. The project has not specifically trialled a support intervention, identification of these support strategies by the trainees enabled the researchers to ask them to expand on how useful they find these and whether/how the strategies are helping them in the classroom and workplace. This showed the researchers that collecting the trainee voice and stakeholder feedback was critical to subsequently plan support interventions that were informed rather than imposed. The project has provided an indication of the impact of support interventions and a springboard for a further piece of critical work.

The project commenced with a comprehensive literature review providing the basis for identifying the current application of dyslexia support interventions for trainees, tutors and workplace employers. International and New Zealand studies were reviewed for accounts of good practice with screening and diagnostic tools, use of adaptive technologies, and effective teaching and learning pedagogies (e.g. British Dyslexia Association. (n.d.a; n.d.b); Brunswick, 2012; Dymock, & Nicholson, 2012; Hazeldine, & Silvester, 2012; McGloughlin, & Leather, 2009; Reid, Fawcett, Manis, & Siegel, 2008; Weir, 2008).

Individual semi-structured interviews were then conducted across the four participant groups, which included:
- 20 trainees who had completed the Dyslexia Assessment Screening Test (DAST)
- 10 employers of the trainees

- 5 tutors
- 5 Primary ITO training advisers.

Narrative analysis of the participant feedback was applied to uncover:

1) the realities of having dyslexia for the trainees

2) how this impacted on their academic learning as well as managing workplace tasks; and

3) what strategies they and the employers, tutors and trainers who supported them, had found useful to improve the quality of their learning experience.

In the following section, each of these areas is described separately, allowing each participant group a voice to tell as much of their own story as possible.

3.   FINDINGS

"Most dyslexia people can't use computers as words jump around the screen and point out our mistakes which is disheartening – we need face to face and praise even minute which strengthen how our brains works and us stronger to move forward" (Trainee)

Several trainees commented on a reluctance to engage with technology as a strategy to assist with the challenges of dyslexia. Whilst some talked about how they struggled with using computers as a support tool, others mentioned how they found their smart phones "*really handy for data storing*". The challenge with technology is interesting as it counters one of the Dyslexia Foundation of New Zealand's key strategies of an ICT-enabled '4D Workplace' and serves to reiterate the very individual nature of dyslexia (Ritchie, 2008). The purpose of prefacing the report findings with the quote is to emphasise the importance of allowing the trainees with dyslexia, and those who support them, their own voice in recounting what works, and what is problematic for them in their day-to-day roles. It is also worth noting that despite grammatical errors, the trainee is well able to make their point.

This section of the report therefore makes extensive use of the voices from each stakeholder group with participant comments to illustrate the key findings about the impact of dyslexia on training, the associated challenges and the support offered by the Primary ITO. Trainees shared their experiences and thoughts on the reality of learning with dyslexia, the challenges they face on a daily basis and the strategies they use to manage their learning in the classroom, the workplace and in their home environment. The trainees' employers openly talked about how they try to support the trainees, expressing a genuine intent to build trainees' confidence and work skills whilst acknowledging the

extra challenges they have. Tutors interviewed in the project talked about the lack of training they have had in the area of dyslexia and how to support dyslexic trainees, at the same time sharing a range of strategies they had generated themselves to assist trainees' learning in the classroom.

3.1　　THE IMPACT OF DYSLEXIA ON A TRAINEE'S LEARNING

"Dyslexic adults will have a range of experiences that will have had
a major impact on their condition" (Training adviser)

Seventeen of the twenty trainees interviewed were diagnosed in compulsory education through either an educational psychology assessment, or the school's own screening process - and had received some form of remedial support during that time. Regardless of this support they continued to experience major difficulties in reading and writing as adults. The remaining three trainees in the sample had been diagnosed through the DAST tool, having been referred by the training advisers. Over three quarters of the sample group stated that school was a challenging time, with early exiting and loss of confidence two recurring themes. These trainees also expressed how their work and career choices have been dictated by their difficulties with reading and writing, relating the lengths they will go to prepare for and complete written work, both in their academic studies and in the workplace.

WHAT THE TRAINEES SAID

Most trainees felt that early schooling experiences had left a legacy of uncertainty at best, and often, insecurity and lack of confidence. Whilst some dyslexic trainees described receiving support from the school following diagnosis, others remembered teachers who either misunderstood the condition or did not acknowledge that they needed additional help. One participant said *"I used to say that words moved on the page and one teacher suggested I go to a psychologist because I was making things up."* A number of the trainees indicated that these early learning experiences had had a significant impact on how they now cope in the vocational education context and in the workplace, as reflected in the following comments:

Early school experiences:

"The whole of my intermediate years I spent time with the gardener"

"I had two teachers who refused to help me. The only help I got was when Mum took me to Kip McGrath"

"The moment they admitted I had dyslexia they had to do something but they never did"

"They didn't know what to do with me at high school. I wasn't dumb enough to go in the low class but not good enough for the other class. I actually scored well on the IQ tests"

"I so struggled with how the teacher was teaching"

Today:

"I wish now that there had been support as I would have loved to stay at school but you lose all confidence when other people don't understand it"

"The physical classroom is still an exhausting and anxiety-producing place where your deficits as a dyslexic can be uncovered"

"I still break out in a sweat as I am struggling to write notes down"

"I just can't read and write confidently on my own"

"The impact has been massive, I can't quantify it but I just don't learn in a classroom", anger and anxiety. I am often anxious about a lot of things"

"It can create a lot of frustration"

Additionally, some of the trainees mentioned the impact of their dyslexia on their career progression and their ability to manage in the workplace context. As one trainee said *"I have gone through a few farm contracts and this really does you over, especially if they find out you have something wrong with you"*. They expressed how their work and career choices had been dictated by their difficulties with reading, writing and math calculations. They described how they had responded to various work tasks by avoiding those with written components and the 'thinking part', opting for the hands-on jobs where possible. One trainee said that his strategy was *"Pretending comprehension of the task and then 'nutting it out' on this own"*; others talked about the "*over-compensation*", and "*duplication of effort*" involved to make sure the work task was carried out correctly.

WHAT THE TRAINING ADVISERS SAID

The advisers talked about how dyslexia is new territory for them as well as for tutors and employers. One adviser commented that there was a considerable variation across tutors and programme providers regarding their level of commitment and skills to support trainees with specific interventions such as adaptive technologies, stating:

> *"You are having to continually think outside the square and work out how to get around the problems they are facing. For example, the trainee managing reading and writing tasks in the*

classroom and the workplace. The requirements for these tasks differ between the two contexts but present similar challenges for the trainee."

Training advisers also stated that in their experience, if the trainee is forthcoming with their employer this makes it easier for the employer to support them. One training adviser stated "*The employers are quite happy so long as they know there is support available. They often can't do enough once they know the trainee has dyslexia.*" Of course, this means that the trainee has to be comfortable and willing to share that they have dyslexia, which they may not be inclined to do. From the advisers' experience "*They keep their dyslexia a secret in case their job is on the line.*"

The advisers described their role as 'having a conversation' with the trainee about what would be a good support for them and then checking if this support is available, for example, being assigned a mentor or a reader-writer, applying for a Smart Pen or other assistive technology. Two issues identified by several of the advisers were first, the limited level of support the trainee receives at home, and second, the length of time between the trainee completing the DAST and receiving the support package.

WHAT THE EMPLOYERS SAID

The employers acknowledged that there is a stigma attached to the trainee not being able to read instructions or manage reading documents to discuss in team meetings, and what this means for their self-esteem. A number of employers mentioned how trying to write things down was the main issue for their trainees as well as the way they interpret when reading, for example "*Getting him to read something takes a bit of time. I recognise the weakness in myself and know that this impacts on his future.*"

They clearly wanted to help their trainees in getting assistance to improve their reading and writing abilities, with one employer sharing a strategy he had found effective, suggesting "*finding out which way they understand to do the jobs correctly and how they can understand what you are trying to tell them by doing so verbally and drawing pictures*". The employers were very aware of how the trainees' previous learning experiences were impacting on their confidence and the further effect of this on their ability to manage workplace tasks and participate in workplace training. One indicative comment was:

> "*It's the self-confidence when it comes to training. They are reluctant to get involved because they didn't do well in school and they have a fear of failure. We have to build confidence in them rather than them thinking they are not able.*"

"If you show me, then I will pretend I know what I am doing, then nut it out myself. I will make a few mistakes but that's okay. If I see how you do it and it doesn't work, you need to give me time to find a new way of doing it." (Trainee)

Whether enrolling in a certificate programme, completing a qualification or managing workplace tasks, the trainees described these as major accomplishments. Some of them were still progressing through their certificate at the time of the interviews and their stories of challenges, set-backs and determination were poignant.

The Primary ITO training advisers support trainees in multiple settings including their classroom, workplace, home and public venues, for example, catching up after class. All participant groups mentioned challenges arising from the programme of study: either those they experienced when working with dyslexic trainees, or the challenges faced by the trainees themselves.

WHAT THE TRAINEES SAID

"I break out in a sweat as am struggling to write notes down in class. It takes longer and it's hard to sit for ages. So exhausting and I am trying so hard."

The trainees shared very emotive stories regarding the challenges they continually face in the classroom, the workplace and in life generally. They talked about coping with challenges presented by factors such as people, processes and the classroom environment. For example, the classroom was described by a number of the trainees as an exhausting, anxiety-producing place as they try to keep up with the teaching pace and completing written tasks. They also associated their anxiety with the classroom environment as a place where their deficits as a dyslexic person can be uncovered. The importance of the tutor using a range of teaching materials and technologies to assist them was emphasised as well as the need for plenty of peer activities and discussions during class time. The trainees also expressed reading and writing challenges, in particular difficulties with spelling.

Time was a significant issue, described by the trainees in terms of the time it takes to write, check and re-write their work. As one trainee commented, *"If they are talking and writing stuff down I cannot keep up with it. I can't write when a whole lot is just spoken as I can only see three letters at a time.....so nine letters mean three times; and the same with numbers. Listening and writing at the same time I can't do."*

When asked about specific challenges in the academic and workplace environments, the trainees all identified written assessments such as essays and report writing as a major difficulty. Multiple choice questions were also mentioned, the level of challenge being dependent on how these were written and laid out. Exams were definitely identified as a key challenge. Conversely, workplace learning was not seen as a barrier.

The training advisers identified a number of challenges the dyslexic trainees face in the classroom and workplace contexts. They mentioned personal challenges of and external barriers which impact on the trainees' ability and confidence to learn. For example, the personal challenges for trainees focused predominantly on difficulties with literacy requirements of the academic work in the classroom and on-job tasks in the workplace. Representative comments by the training advisers of the personal challenges faced by trainees included:

"Trainees can be very detailed in their verbal answers but can't write anything down"

"If a question can be re-worded for them it's not an issue but if someone is borderline [for example, an inconclusive DAST result] *dyslexic, it is so much more difficult for them"*

"From the neck top to the laptop – getting it from their head on to paper"

"He can write okay but he can't take notes off the whiteboard or write a whole sentence"
"It snowballs if the trainee doesn't keep up in class"

"They avoid coursework altogether. They say 'I'm too busy on the farm, there's no-one to help me read or write it down for me'"

The training advisers also noted external factors creating challenges for the trainees. These were described by the following comments**:**

"Trainees who have been tested have received software but they are not using this technology as no-one has shown them how to"

"The inflexibility of some tutors just picking up the phone and discussing the gaps and/or difficulties with the trainee"

"There needs to be a more flexible model for assessment. The current model of delivery and assessment wording has a rigid structure with little flexibility to cater for trainees struggling with LLN, dyslexia or other learning challenges"

The advisers also talked about some of the difficulties they face in their role in terms of being able to support dyslexic trainees, such as lack of time to work alongside the trainees and geographical distances, *"I need to physically see them doing things in the workplace but I just don't have the time for this." It works well if they are in a class that I can attend however geographical distances can prevent*

this." Also, a lack of knowledge and experience with using the DAST was identified by one adviser as an inhibitor to their ability to help trainees: *"I'm not formally trained in using the DAST which would be really helpful actually, as I am working with trainees every day but don't always know why they are struggling with things."*

WHAT THE TUTORS SAID

The tutors talked about the challenges they see the trainees experience in the classroom, such as:

- Struggling with writing things down
- Easily distracted
- Lack of confidence verbalising their thoughts or answering questions
- The workbook guides are all written [text] with few visuals
- Difficulty putting their ideas and thoughts on paper

"When we work through the written coursework they [dyslexic trainees] *look at you vaguely and just don't do it* [the work]. *They don't get involved in that part of the qualification but they still need writing skills if they are wanting [sic] to work in the industry."*

This last quotation indicates the frustration this tutor felt, knowing that the trainee needs these skills, but being unable to present the material in a way which makes it easy for them to engage. Such an observation was by no means unique. A significant challenge the tutors faced in helping trainees learn was their lack of knowledge and skill in pedagogy which specifically supports dyslexic trainees. Comments included *"It's a real ad hoc discovery of dyslexia. If a trainee is struggling, I usually ask the training adviser to help; there is no system in place to help me help them in the classroom"* and *"I haven't had a lot of training in this space, for example, I know that technology can help but I don't know what technologies do this".* These exemplified the restrictions they faced in order to help the trainees in the classroom context.

WHAT THE EMPLOYERS SAID

Employers identified several key challenges their dyslexic trainees experience on the job. They mentioned how the trainees' dyslexia presented difficulties for them with the technical requirements of the job as well as some personal challenges. One employer noted *"Writing is a challenge for him. He gets given the time sheets but his partner does all his writing. Even when I ask him to do it she does it for him because he doesn't have the confidence. He knows it and she writes it."*

The technical challenges mainly focused on difficulties with reading and writing, echoing the feedback received from the training advisers and many of the trainees. As one employer said, *"The main issue*

for her is interpreting what she reads. And you don't anticipate how long it will take them. A two-hour task may take them [dyslexic trainees] four hours, and things can get rushed". All of the employers recognised that their trainees had more than sufficient knowledge of the job requirements however they struggle with processing the instructions. One employer mentioned "*Processing and communicating information correctly is an issue – they [dyslexic trainees] can get things around the wrong way. They know what they need to do but may not get the information in the right order.*"

3.3   SUPPORT FOR DYSLEXIC TRAINEES IN THEIR LEARNING

"If dyslexics do not learn the way we teach, we need to teach the way they learn."
Tutor paraphrase of popular expression (https://akoaotearoa.ac.nz/download/ng/file/group-7/students-poster.pdf)

A range of support strategies which were being used by the trainees, the employers and the tutors were identified, such as specific assistive technologies and mentoring support. The trainees also identified techniques which they had put in place as coping mechanisms, such as coding systems for workplace tasks and working through assignments at home with the help of their partner. The training advisers and mentors talked about how they found a lot of the support they provided was in the area of literacy and numeracy, helping trainees comprehend the assignments and complete assessments. The tutors talked mainly about how they need to consider different approaches in their teaching, especially when designing group work. They admitted that they had received little or no training in how to support dyslexic learners in their classroom, and seldom changed how they presented material or planned for different group dynamics.

WHAT THE TRAINEES SAID

"I have to work harder to succeed and pass on my own merit. I want to prove that
I am better than people have said I am."

Along with identifying the challenges they face in their learning, the trainees also talked about some of their 'successes' with managing their learning as a dyslexic. A number of their comments highlighted this, such as:

"*I make a game out of it with my peers, see who is going to finish first and have the highest mark. Competition works for me*"

"I prefer to print stuff off, not read on the computer. I can then refer back and make notes"

"I give myself extra time and prepare well in advance"

"I just go in and nut it out. It's getting easier"

Although a number of the trainees described their learning experiences as "*just trying to get through the best I can*", they also identified a range of strategies they use to help themselves in their learning and strategies which they found supported them in the classroom, including:

- Teaching and learning technologies, for example, YouTube video clips
- Adaptive technologies such as Smart Pen, Dragon Voice to Text software
- Peer activities
- Group and peer discussions
- Regular feedback from the tutor
- The tutor explaining the learning material in different ways
- Having a reader-writer

Assistance from a tutor was emphasised as having a significant impact on the trainees' confidence and belief in their abilities to achieve and successfully complete their qualification. The positive impact on self-esteem from good tutor support was evident and given the anxiety that some trainees had described in previous responses in relation to the classroom experience, it is clear that the tutor requires significant skills with empathy and relationship building. One trainee noted the additional steps taken by his tutor, saying "*He saw me after class and gave me guidelines on what to do. He prompted me to see what I was thinking and checking if I was on the right track; he talked me through it. My self-esteem in the classroom was negative 100 then it changed to positive 100 for his help.*"

Strategies trainees used in the home environment and the workplace were also described. One trainee described their partner explaining their workbook material, saying "*I can't spell anything because I can't guarantee it is right. Someone asks me what does this word mean and I have no idea. My wife assists me to put it in to English, she's like a reader writer*". Other strategies included:

At their home:
- Setting study times that are balanced with family time
- Talking things over with partner
- Someone reading it out loud and helping me work out the answers
- Use of a diary in which they could make notes and write down questions at their own pace to take back to the classroom

In their workplace:

- Cell phone photos of key work tasks

- Colour coding, for example, blue exit gates, red for milking

- Keep good verbal communication going with employer and team

- Updated health and safety and chemical data sheets with a picture of each product

- Bar codes in the chemical shed

- Use same routine for each task

- A supportive manager

Having a supportive manager was emphasised as a significant factor influencing the trainee's confidence and sense of purpose This was highlighted in comments such as:

"He doesn't give me any paperwork because he knows I am a good tractor driver and best in the workshop"

"He is pretty good. He knows what I am like and we jot things down together. He has dyslexia himself"

WHAT THE TRAINING ADVISERS SAID

"The training adviser's support in the classroom is really important.
Some trainees get embarrassed when help is given in class though.
They don't want to feel or look dumb; this is a fear of theirs."

A number of different support strategies and mechanisms were mentioned by the advisers, the application of these ranging across the workplace and classroom contexts. They offered a number of examples as well as observations of the tutors' role in the classroom:

"There is a stigma attached to using assisted technology in the classroom. It is important how this is dealt with in that environment. The tutor needs to know how to support them as much as we [training advisers] do"

"The main areas of support needed are reading and writing. As a training adviser I introduce them to the tutors, make the tutor aware of the trainee's needs such as going over material more than once, finding different ways to explain material, explain that they may need one-one help at times"

"Handouts are good. There is a lot of writing on the whiteboard and students are expected to copy all of this down. The course requires a lot of writing"

"When tutors tell me what they think is needed re-trainee support, I can then put strategies in place"

"He comes in for study nights. The tutor is available to help at these and the mentors attend as well, so there are people the trainee can ask questions of and get one-one help too"

The training advisers also commented on issues employers needed to address or be aware of in the workplace:

"What do they need? A checklist or tick sheet with the list of jobs written down so they can work through them in the right order"

"They need a patient employer in the workplace, someone prepared to find other ways to explain how to do things"

"Some of the trainees have one-one mentoring support also, minimum every three weeks' contact"

"It's about involving everyone who is involved in that workplace so that we are all on the same page with how to help the trainee"

Training advisers also recognised the need for leadership and hands-on modelling in their own role:

"I spend a lot of time one on one helping them with their coursework"

"As the training adviser we can talk with the tutors, set up mentors and put recommendations through to the National Literacy & Numeracy Adviser

"It's about making extra time to find out what can support them and then how I can help with making this happen"

"I will send a text a week prior to the study night date and remind them on the day"

"When possible I help him with assignments after class, like a reader-writer"

The advisers also made comments about the positive outcomes being achieved by the trainees, making particular reference to the appropriate support they received in the classroom which influenced this. As two advisers said, "*I see changes in my trainees' confidence. They are now gaining their qualifications without a lot of extra help and coming to class regularly*" and "*He was really nervous at the start but has become a lot more confident and gone on to complete more papers. He doesn't need help anymore but we still keep in touch.*"

WHAT THE TUTORS SAID

Although the tutors mainly talked about the difficulties they experienced in deciding how to best teach trainees with dyslexia, they did mention some approaches they take to support the trainees' learning. As one tutor explained, "*I am available to give them one-one tutoring on field study nights. In all cases they know what to do and can tell you; it's putting it down on paper that is difficult.*"

Identifying several challenges for dyslexic trainees in the classroom and expressing concern about their own challenges in helping the trainees learn was evident in their feedback, however the tutors also outlined some strategies they use which they found were effective, including:

- Giving the trainees more time to compete assignments
- One to one tutoring
- Study nights
- Evidence-based assessments, for example photos of trainees' work
  "*Roll out less written work and have a more evidence-based qualification*"
- Have the information on DVD so they can take these away
- One to one mentoring

WHAT THE EMPLOYERS SAID

"The biggest thing is that he is quite capable with his hands and doing things. He is very hands on ands learns how to do the job this way. So I teach them about chemicals, show them and go over this half a dozen times to go over the manual in a hands-on way."

The employers talked about the main areas of support the trainees needed in the workplace as well as the different strategies they used to support trainees. A strong sense of employer awareness and acceptance of dyslexia and what the trainee needs to be able to successfully manage on the job came through in their comments, such as, *"It helps to understand that it is not about intelligence. It is what it is and he does need the help to keep motivated and believe in himself."* The main areas of support needed by the dyslexic trainee in the workplace included:

- Acknowledgement that they need extra time to understand and complete work tasks
- Having someone outside of the workplace to help them with the coursework
- Patience
- Building up their self-confidence in their abilities to do the job
- Getting them more assistance to improve their reading and writing
- Finding out which way they understand how to do the job correctly
- Assisting them to learn in a practical way and build on their strengths

How they support the trainees on the job included a range of practical strategies which also supported trainees' personal development such as increased confidence and self-esteem. Different adjustments to support their trainees in managing work tasks were mentioned as well:

- Pay for additional training and help with reading and writing

- Talking through how to do the job first then working through the written instructions
- Have everything written down so they can see and understand the task, and making sure they are getting the numbers right
- Talking manuals with pictures so the trainee can see and hear what they have to do
- Let them get on with what they are good at
- Go through things practically and not expect them to read
- Establish routines so that they are doing the same job in them same way at the same time of day
- Keep writing to a minimum
- Having a motivating and helping attitude
- Providing more time and checking in regularly, and making sure the trainee has understood what they have been told
- Being flexible
- Introducing tasks in small chunks
- Double checking the trainee understands the job requirements: *"The dyslexic stuff is holding him back and he would have achieved a lot earlier if he had the help; he knew he had a problem. We are now helping him go forward. Day to day I have to work quite closely with him to get the work done, for example cow numbers, and I keep an eye on what he does to check."*

4.   DISCUSSION

"Every day I wake up there is always a wall in front of me. I physically see a brick in front of me and every morning I begin to knock the wall down. If I get upset or frustrated the wall stays at that place until l crack it" (Trainee)

Dyslexia is a condition that individuals will have for life, however with successful management dyslexia need not constrain career choices or limit achievement. This project investigated the types of strategies and resources which support dyslexic trainees in the classroom and workplace environments, as identified by the project participants. The findings have also highlighted how trainees support themselves in their learning within the home context. Consideration of all three settings is extremely pertinent to the dyslexic trainee's learning, as learning and the associated challenges do not only occur in the academic context.

What resources and technologies are available to support trainees with dyslexia? There is a range of support interventions currently being used by trainees including Smart Pens and voice-to-text

software. Alongside comments about the different strategies which the trainees found helpful or instigated themselves, there were other comments which highlighted the important consideration of how the trainee feels about having to use these strategies. This was particularly in reference to the stigma of using strategies in front of their peers and employers.

However, the question remains as to how effective these tools are in enabling the trainee to manage their learning in the multiple contexts they traverse – the workplace, the classroom and the home environment. As this project has found, trainees with dyslexia find different ways in which to either mask their condition or manage it in their own way. A personalised support package combined of assistive technologies and other support strategies and resources can be developed to fit the needs of each trainee and the stakeholders who support him or her.

The project team thinks the material above shows the need for a 'whole approach' to identifying and implementing support interventions for dyslexic learners. This approach encompasses support from multiple people such as mentors, training advisers and family partners, the trainee managing their dyslexia, and a variety of resources and technologies which are aligned to individual learner needs. It also requires a number of actions to be taken by all key stakeholders including:

- A policy shift – A whole-of-organisation acknowledgement of dyslexia and establishment of good practices in supporting dyslexic learners and staff
- An attitude shift – By organisations, institutions, employers, tutors and training providers
- An individual shift – By trainees, employers and tutors - acknowledging and accepting dyslexia.

The Primary ITO's 5-Step Wraparound Dyslexia Support model (*Appendix B*) reinforces the concept of a whole approach to supporting dyslexic trainees. Actions that can be taken to further develop and implement the model could encompass:

- Building up a culture of understanding about dyslexia across the organisation;
- Upskilling staff in how they can best assist people with dyslexia;
- Trialling the model with a group of trainees and monitor their progress and evaluate impact and outcomes;
- Trialling the model with a group of staff in the organisation who identify as dyslexic, to evaluate the process, and the impact and outcomes of support interventions;
- Incorporating a sixth step which would evaluate the impact and outcomes of support interventions. An evaluation of the model's application could also be included in this step.

The researchers acknowledge that the data collection in this project was likely due, at least in part, to the conscious positioning of the Primary ITO as a "dyslexia-friendly organisation" which has already made in-roads in establishing a wraparound system of support (Primary ITO, 2014). One example is a voluntary mentoring programme which provides an additional mechanism for trainee support. The mentors who have been mentoring dyslexic trainees described the main areas of support their trainees required as well as identifying different challenges the trainees' experience.

Trainees were willing to share their learning experiences, both the positive and the challenging, in the one-one interviews. Tutors, training advisers and employers were all well aware of the difficulties dyslexia can raise for trainees, and were committed to assisting as best they were able, although there was a varying range of confidence in their own skill sets to achieve this. A range of support strategies for dyslexic trainees and those who support them, is provided as a starting point for trainees, employers, tutors and organisations (*Appendix A*). There is an associated reference for this resource (Styles, 2015) which contains more detailed material about dyslexia, relevant to all stakeholders involved in this area. Other recommendations resulting from this project include that:

1. A professional development workshop for tutors is developed

2. A guidebook for tutors is developed. The guide should focus on strategies the 'do's and don'ts' for teaching dyslexic learners.

3. A guidebook for employers is developed. The guide should include case studies providing real examples of dyslexic trainee challenges and associated strategies that have been applied and found successful in the workplace setting.

4. The Primary ITO's 5-Step Wraparound Dyslexia Support model (*Appendix B*) be contextualised for other education providers.

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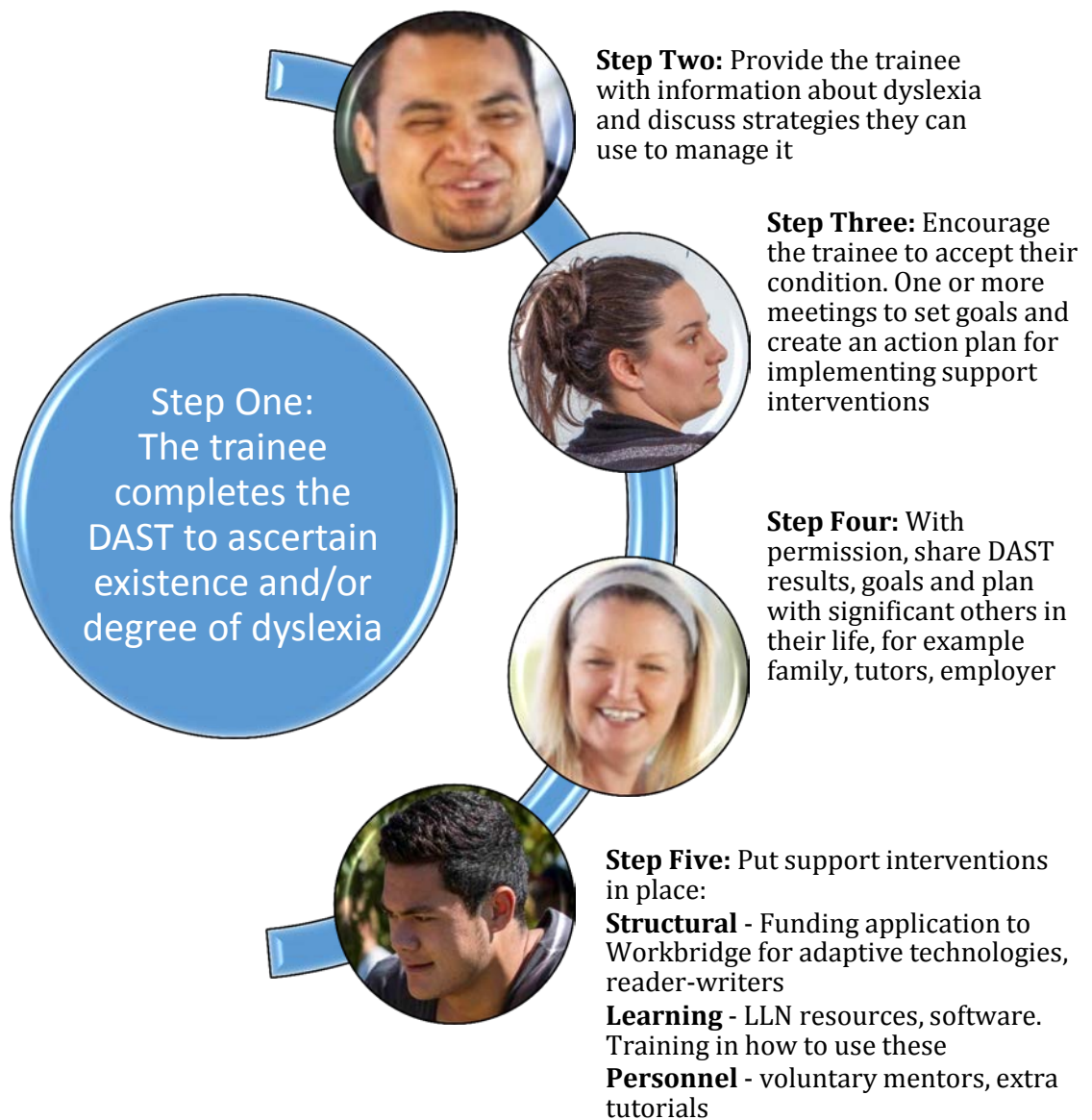
Suggested Dyslexia Support Strategies

What can the trainee do?	• Acknowledge their dyslexia and share learning preferences and progress with classmates, training advisers, tutors and employers • Allow extra time for learning • Develop a 'library' of resources and memory aids for out-of-class learning
What can the employer do?	• Recognise the abilities and competencies, rather than the disability • Allow more time for tasks • Use colour coding and data sheets for workplace tasks and reminders of important processes, with more visuals, and less text
What can the tutor do?	• Encourage a buddy system • Use charts, mind maps, video clips • Don't rely on spoken words only • Encourage peer review • Allow for a range of presentations from the students, e.g., portfolios, oral • Allow extra time for dyslexic students to hand in work • Find out what the dyslexic student finds difficult in class
What can the organisation do?	• Develop/review policy • Develop a buddy system process • Offer dyslexia screening to students/trainees • Provide information about dyslexia to all staff • Provide proof reading support • Allow for and make accessible technological supports such as Smart Pens, voice-to-text software • Declare your organisation to be dyslexia-friendly • Provide quality information to dyslexic students/trainees on how to manage their dyslexia in the classroom and workplace

Adapted from: Styles, M. (2015). Supporting adult dyslexics in tertiary education and training: Resource handbook. NZ: Ako Aotearoa. www.akoaotearoa.ac.nz

A core philosophy of the Primary ITO's wraparound model is the holistic nature of support. Key to the model is emphasising how an individual dyslexic trainee can be responsible for managing their dyslexia and identifying and meeting their own learning needs. It also recognises how the employer, the tutor/training provider and the ITO can provide targeted support strategies within the workplace and classroom settings. The model has been informed by international research on what is good practice and involves five sequential steps to provide support to trainees with dyslexia in their multiple learning contexts. It supports individuals as fully-functioning members of the community and workforce. The model differs from existing and traditional approaches which view dyslexia as confined to the individuals (who often keeps this to themselves) and any remedial support services provided. Figure 1 illustrates the wraparound model and provides a description of each of the five steps.

Figure 1.   A 5-Step Wraparound Dyslexia Support Model

Step One:
The trainee completes the DAST to ascertain existence and/or degree of dyslexia

Step Two: Provide the trainee with information about dyslexia and discuss strategies they can use to manage it

Step Three: Encourage the trainee to accept their condition. One or more meetings to set goals and create an action plan for implementing support interventions

Step Four: With permission, share DAST results, goals and plan with significant others in their life, for example family, tutors, employer

Step Five: Put support interventions in place:
Structural - Funding application to Workbridge for adaptive technologies, reader-writers
Learning - LLN resources, software. Training in how to use these
Personnel - voluntary mentors, extra tutorials

Step 1. Screening Tool

Use of the Pearson DAST screening tool to diagnose dyslexia. The DAST helps to distinguish between a person with low literacy and numeracy skills and one who has dyslexia. The screening is designed to provide more information for determining ongoing support and give a firm indication of dyslexia, which is very empowering to a dyslexic learner.

Step 2. Information

Provide the learner with up-to-date information about dyslexia, including the potential and real challenges, and positive features. For most people, access to information about their dyslexia is very

empowering. Dyslexia is an area where there is a lot of misinformation around and also a lot of newly established information.

Step 3. Encourage the learner to accept their condition

Encourage and support the learner in accepting they have dyslexia and be upfront in telling others about it. For many people this can be a challenge. The provision of quality information, including the positive features of dyslexia, and a list of high-achieving people who have dyslexia is very reassuring. This step is as much about building self-confidence and the emotive side of accepting dyslexia as it is about education and training.

Step 4. Share DAST results, goals and plans

This step is about changing the level of understanding and behaviours of the people invovled in the dyslexic learner's life. It requires the dyslexic person's permission and is about changing the environment for them. Tutors, training providers, employers, supervisors, work colleagues and family all have a vested interest in accepting the dyslexic person's condition. It is about giving significant others quality information and tips so they can assist the dyslexic person. For example:

- Giving instructions in two ways, orally and written – as opposed to just orally.
- Encouraging them to use the applications on their phones.
- Giving them extra assistance with time management.
- Avoiding multiple questions and complicated multi-element instructions.
- Using dyslexia friendly font on written material, and using coloured paper instead of white paper for printed material

Step 5. Support interventions

Based on the results of the DAST and in discussion with the dyslexic learner, support interventions are identified and implemented to assist the learner in different settings – the classroom, the workplace and in their home environment.