Implementing Evidence-Based Practice: A Visual and Video-Modelling Case Study

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ABSTRACT

This paper examines the multi-component use of visual supports, namely visual schedules and video modelling, to achieve the vocational goal of making a sandwich independently for a 16-year old girl with autism. This practice approach was informed by both the three step process from the National Professional Development Centre (The NPDC Model, n.d.) as well as from a Kaupapa Māori culturally-responsive perspective - He Ritenga Whaimōhio (Macfarlane & Macfarlane, 2013). Relevant research (tika) and underpinning theories of autism were considered, family voice and priorities collected (aroha), and a teaching plan developed, implemented and evaluated (pono) to achieve the long-term goal of increasing a young woman's independence. The intervention was led by the author of this paper supporting the Special School classroom teacher, teacher-aides, parents and the student directly. The successes and challenges of this intervention were monitored and will be critically discussed in this practice paper.

Practice Paper

Key words:
autism, evidence-based practice, implementation, outcomes, video modelling, visual supports, vocational skills

EVIDENCE-BASED PRACTICE MODELS

The National Professional Development Centre (NPDC) on autism spectrum disorder have developed a 3-part model to address the learning needs of individual learners with autism spectrum disorders (ASD) - namely assessment, implementation and outcomes (Figure 1). It has been refined to include training, coaching and additional outcome measures specific and relevant for individuals with ASD. These are represented by the circles and fourth rectangle on the model in Figure 1 and are specifically referred to in the discussion section of this paper.

This overarching '3-step' model for evidence-based practice (EBP) is common to western psychology and education sectors and can be seen to align with common EBP models in use in New Zealand such

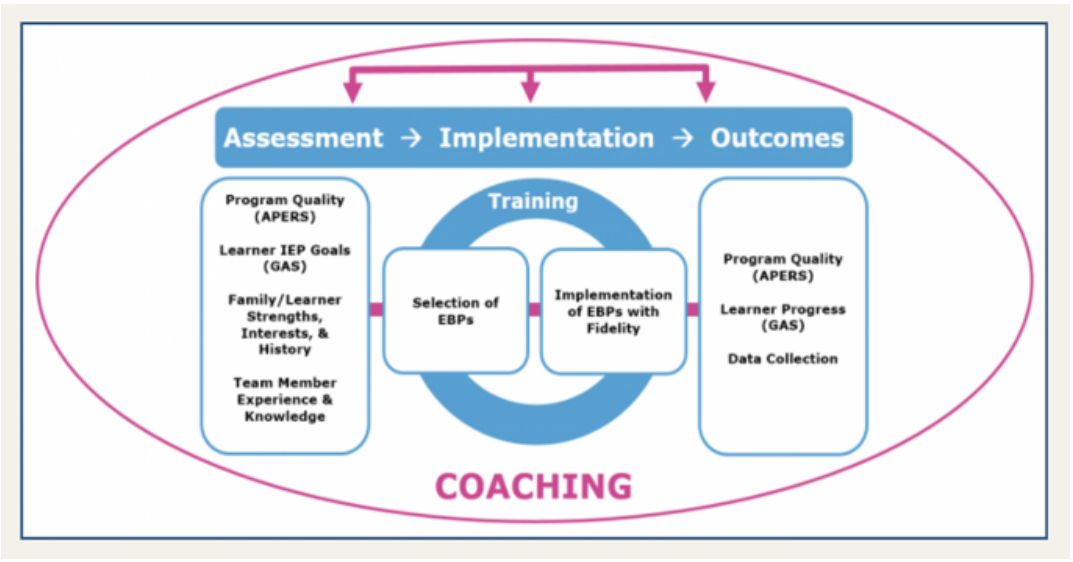

Figure 1: The NPDC model. Source: Autism PDC, n.d.

as Bourke, Holden and Curzon's three circles model (2005). However, to recognise cultural diversity as a practitioner within a bicultural society as determined by the Treaty of Waitangi (Sue, 2001, cited in Macfarlane & Macfarlane 2013, p.67), I have chosen to use a culturally-responsive model to structure my analysis of the following case study.

Macfarlane and Macfarlane's He Ritenga Whaimōhio: Informed Practice Model (2013) is the point of intersection between 'tika' research, 'aroha' whanau/family voice and perspective and 'pono'[1] practitioner knowledge and skill (see Figure 2).

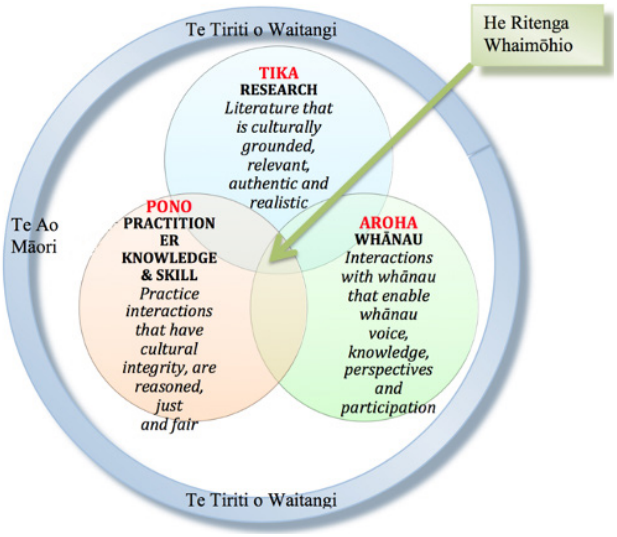

Figure 2: He ritenga whaimōhio: Informed practice model. Source: S. Macfarlane & A. Macfarlane, 2013, p.73

This circular structure embedded within te ao Māori (a Māori worldview) and Te Tiriti o Waitangi seemed a better 'fit' in the context of special education in Aotearoa New Zealand. The assessment component of the NPDC model is represented in both the pono and aroha circles where practitioner tools (such as task analysis) are used to assess learner needs and abilities (pono), and family priorities are drivers for individual goal-setting (aroha). Furthermore, 'implementation' is based on selecting EBPs (tika) and practitioner knowledge and skill to use these (pono). Finally, 'outcomes' must be monitored and evaluated (pono) while still carrying meaning and relevance for the learner and family alike (aroha). In this way, I hope *He Ritenga Whaimōhio* can improve the NPDC model in an attempt to strive for authentic inclusion, which I believe inherently demands accommodation of diversity and cultural competency.

CASE STUDY INTRODUCTION

Sarah[2] is a calm, patient and often bubbly 16-year-old student with autism. She is predominantly non-verbal and uses a Pragmatic Organisation Dynamic Display (PODD) book to communicate. She enjoys participating in sensory activities with her class and she follows simple verbal instructions well. Sarah has a lovely smile and laugh when she is excited and content. She is very familiar with visual supports especially for functional uses such as her communication (PODD book) and in her learning (visual schedules and cues). Her biggest challenge currently is her dependence on prompts and reinforcement from others to complete everyday tasks.

Prior to the intervention reported in this paper, she has learnt how to make fairy bread and attempted making a sandwich using visual schedules and other visual supports such as Tar Heel reader books[3] and visual sequencing activities.

In this paper, I use the word 'intervention' to refer to the period of time that I worked with Sarah and her support team, rather than to indicate a specific action or singular practice that was implemented. I will refer to several evidence-based practices that were selected to address Sarah's unique needs as part of the 'intervention'. Despite the somewhat medical connotations of the word, Research Autism define intervention as, "any kind of activity that is designed to improve the quality of life for people on the autism spectrum" (Research Autism, 2018a, n.p) and it is in this broad multidimensional way I intend to use the word to encompass the combined, collaborative and culturally-appropriate use of evidence-based practice (EBP) with this case study student.

The priority goal for Sarah during this intervention was around the vocational skill of independently making a sandwich. In addition, this was also intended to address her challenge of prompt dependence and therefore contribute to the long-term goal of increasing her independence in daily life. Sarah's support team were looking for an evidence-based practice to achieve the goal of making a

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[1] These te reo māori words are translated in the following way by Macfarlane and Macfarlane: *tika* (right, true, correct), *pono* (fair, just, honest) and *aroha* (care, compassion, love), (2013, p.72)

[2] Sarah is a pseudonym used to protect the student's privacy

[3] A digital resource of accessible books found at https://tarheelreader.org/

sandwich independently while decreasing her need for verbal and visual prompts.

IMPLEMENTING HE RITENGA WHAIMŌHIO: INFORMED PRACTICE

As discussed, I have chosen to structure this practice paper through the lens of 'He Ritenga Whaimō hio: Informed Practice', developed by Sonja and Angus Macfarlane (2013). This model, as presented in Figure 2, is encased by te ao Māori and Te Tiriti of Waitangi. As Macfarlane and Macfarlane state, "reminding professionals of the importance of Māori worldview perspectives and the three treaty principles of partnership, protection and participation" (2013, p.72) and it is the view of the author that recognising these principles is not only the responsibility of educators working within our bicultural society but also necessary to strive towards authentic and inclusive outcomes for all.

Firstly, the evidence-base and research or 'tika' behind two evidence-based practices will be examined; visual schedules and video modelling (VM). Secondly, in line with assessment best-practice and valuing the 'aroha' circle of evidence, the suitability of these EBPs to the learner and family/ whanau characteristics, beliefs and priorities will be explored. Finally, the 'pono' circle including the implementation and evaluation of the teaching plan or intervention with the case study student will be reported and the outcomes, limitations and recommendations discussed.

Tika Research: Selecting Evidence-Based Practices

Visual Supports

Visual supports are used widely by classroom teachers, special educators, and communication specialists such as speech and language therapists as well as parents and families in Aotearoa New Zealand. This is evident in practice and in key documents such as the New Zealand Autism Spectrum Disorder Guidelines (Ministries of Health & Education, 2016). For example, TEACCH is a commonly-used multi-component behavioural-based teaching approach in New Zealand which uses visual supports in a variety of ways (2016, p.312). A key component of TEACCH is visual schedules. TEACCH is founded on the premise that people with autism process visual information more easily than verbal information (Research Autism, 2017a). The NZ ASD Guidelines also cite the "strong visual processing of many children with ASD" (2016, p.97) and "strong visual-spatial skills" (2016, p.114) as relative strengths that can and should be used in teaching and learning.

Research Autism defines visual supports as, "the presentation of information in a visually structured manner, that is, using pictures or photos, to make it easier to understand" (Research Autism, 2018b). Visual supports encompass a wide range of visual-based interventions - such as the Picture Exchange Communication System (PECS), some social stories, video modelling and visual schedules. Broadly, these supports can be divided into three groups: visual boundaries, visual cues and visual schedules.

Table 1
Types of Visual Supports

Types	Examples
Visual Boundaries	• Room arrangement • Covering or shielding materials
Visual Cues	• Visual instructions • Graphic organisers • Choice boards • Labels
Visual Schedules	• Individual schedule (task or time-specific) • Classroom schedule • Red/Green ask schedules • First/then schedule

(adapted from "What are VS?" Sam & AFIRM Team, 2015)

Sam and AFIRM Team (2015) state that while visual supports collectively meet the evidence-based practice criteria set by the NPDC, specific subtypes of visual supports might not meet the evidence-based practice criteria individually. Visual schedules had already been selected and implemented with the case study student and formed the starting point of the intervention to be discussed. It is therefore important to consider the evidence base for both visual schedules and video modelling.

Visual Schedules

Visual schedules are a set of pictures that illustrate the steps involved in a specific activity. They can be created at relatively low-cost using a combination of photographs, pictures, written words or physical objects. They can illustrate sequence as well as increase predictability within a task or transition. These schedules were designed to address specific difficulties experienced by people with autism. According to Banda and Grimmett, "Individuals with autism may have difficulty processing auditory

information, instead responding to visual input as their primary source of information" (2008, cited in Research Autism, 2018c). Furthermore, Knight, Sartini and Spriggs (2005) posit, "the use of visual supports can reduce student dependence on caregivers if the student learns to use the visual support independently to stay on-task and on-schedule" (p.158). This is in line with the more general evidence base for visual supports as a whole and is commonly accepted as beneficial in broader educational pedagogy. For example, the use of multiple representations is one of three key principles of universal design for learning (Mitchell, 2010).

Despite this and the previously mentioned practitioner use and prevalence of visual supports and schedules, including TEACCH in New Zealand classrooms and educational settings, Research Autism's summation of the evidence base behind visual schedules is low:

> *There is some very low-quality research evidence (one group study and over 20 single case design studies) to suggest that visual schedules may provide some benefits (such as increased independence) for some children on the autism spectrum. However, the research also suggests that visual schedules may only work if the children have been taught how to use them and are prompted and rewarded for using them.* (Research Autism, 2018c, n.p)

The second point made here and also hinted at by Knight et al., (2005) highlights the significance of prompting and reinforcement in the relative success of visual schedules. This is pertinent to this case study and intervention because of the aforementioned challenge for the case study learner: a dependence on prompts and reinforcements. This consequently limits Sarah's independence in completing daily living tasks such as preparing food for herself. Could this dependence be an unintended side-effect of her learnt behaviours around visual supports which appear to dominate her communication and learning at school? In terms of identifying appropriate evidence-based practice, the support team know that visual schedules can and do 'work'. However, they have not led to the desired outcome in terms of spontaneity and independence.

Video Modelling

Research Autism (2017b) defines video modelling (VM) as, "a method of teaching in which an individual learns a behaviour or a skill by watching a video recording of someone (the model) demonstrating that behaviour or skill" (n.p). Historically, video modelling can be seen to be rooted in Bandura's social learning theory from the 1960s, which posits observational learning through modelling and imitation of others (Shipley-Benamou, Lutzker & Taubman, 2002). In this way, modelling - live and in person - is a fundamental developmental and social learning tool. Since the early use of video modelling for children with autism in 1982 by Steinborn and Knapp to target traffic awareness and pedestrian skills, a monumental rise of audio-visual technology to include audio and video recording on hand-held personal devices has allowed for 'symbolic' modelling to be pre-recorded and used over and over again with increasing ease and accessibility. At the time of publication, video-recording devices such as a smartphone or tablet are almost ubiquitous in many educational settings in New Zealand.

While the key features of the evidence base for visual supports have been mentioned earlier in this paper, there are specific features of video modelling that relate to some of the common characteristics of an individual with ASD. These have been succinctly recorded by Watkins in a recent collection of New Zealand-based 'Promising Practices and Interesting Issues' (Watkins, 2016, p.35), as shown in Table 2 below. Furthermore, according to the NPDC (Autism PDC, 2017) the evidence-base for video modelling intersects as an appropriate practice for teaching vocational skills in 15-22 year olds.

Table 2
The correlation between core characteristics of ASD and key aspects of video modelling

Characteristics of the individual with ASD	**Key Aspects of video modelling**
Visual learner	Visual medium
Highly motivated by technology	Technology based
Need for structure	Allows task to be broken into steps
Acquisition of skills through repetition	Can be replayed across various settings
Attention to detail	Target skills can be highlighted

Characteristics of the individual with ASD	Key Aspects of video modelling
Persistent deficits in social communication and social interaction, and restricted, repetitive patterns of behaviour, interests or activities (DSM-5 diagnostic criteria)	Targets a range of skills, including social communication, rigidity of thought and sensory issues
Exceptional memory and echolalia	Utilises skills of learning through imitation
High levels of anxiety in social situations	Eliminates stress and anxiety that may be experienced in live social situations (LeBlanc, Coates, Daneshvar, Charlop-Christy & Morris, 2003)

Source: (Watkins, 2016, p.35)

When considering video modelling as a potential EBP, it is important to distinguish the different types of video modelling as much of the literature and evidence around VM is endeavouring to compare and contrast the effectiveness of these differing types (Cannella-Malone et al., 2011; Shipley-Benamou, Lutzker & Taubman, 2002) as well as comparing video prompting with static visual supports (Mechling & Gustafson, 2008).

Types of video modelling can be distinguished by either the position of the camera, the subject of the video or the length of instruction. Basic VM and video self-modelling (VSM) are filmed from the perspective of an observer. Basic VM uses a peer or adult model. VSM uses the student themselves to perform the target behaviour. Point-of-view modelling (Cannella-Malone et al., 2011; Shipley-Benamou et al., 2002) is filmed from the perspective of the person completing the target behaviour (i.e. over the shoulder). Video prompting is the use of short individual tasks played separately and in sequence. In terms of position of the camera, it can be either observer (Mechling & Gustafson, 2008) or point-of-view perspective (Cannella-Malone et al., 2011).

Aroha Whanau: Matching the Potential EBPs to the Learner and Family/Whanau Priorities

In Sarah's individual learning plan (ILP) meetings, her parents often indicated their priorities are related to life skills and Sarah taking responsibility for everyday tasks such as cleaning her room, loading the washing machine as well as food preparation. As a result, the following goal was set for her at the beginning of this year: *Sarah will gather all ingredients and kitchen utensils necessary to make a sandwich independently.*

Visual schedules were an existing and established practice for Sarah and were therefore selected as the primary EBP for this goal. Sarah's reading programme was also integrated around this topic to include highly visual Tar Heel readers and sequencing activities.

Sarah's family and her support team at school identified an increasing prompt dependence as a problem area in both vocation and communication for Sarah. As discussed in relation to tika, this could be seen as both a selection-criteria for and a product of prompt-influenced EBPs used with this student over time, such as visual cues and schedules. As a result, Sarah's teacher considered VM as an additional EBP to help achieve Sarah's goal of independently (with fewer prompts) gathering all ingredients and kitchen utensils necessary to make a sandwich and the next step to make a sandwich. This is where my period of intervention began, taking the next step from *'gathering all ingredients and kitchen utensils necessary to make a sandwich independently'* to making the sandwich itself.

This matched the wider learner, family priorities and goals to give a holistic view of Sarah. As a PODD user, who is due in the near future to trial iPad AAC app Touchchat, Sarah is a highly visual learner and communicator. However, in her communication, Sarah is also highly prompt-driven, and as a result, her family are interested in investigating other forms of prompt-based assistive technology such as the Octopus Watch (Joy, 2018) with the aim to prompt Sarah to complete some of her everyday tasks with a greater degree of independence from her parents and teachers.

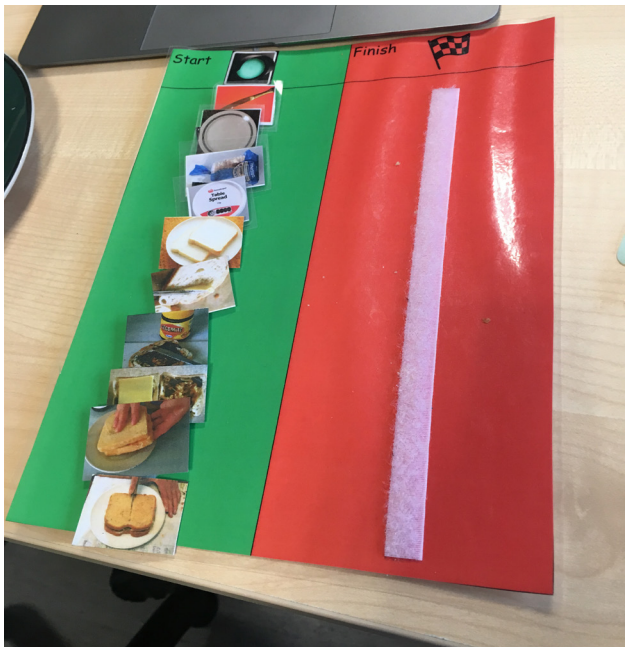
Pono Practitioner Knowledge and Skills: Developing, Implementing and Evaluating a Teaching Plan

Once the target behaviour had been identified and observational baseline data was shared, a clear goal was set for the intervention period: *Sarah will make a vegemite sandwich independently using a combination of visual prompts and basic video modelling.*

The steps taken in the implementation phase were greatly influenced by the planning and practice guidelines within the NPDC's Video Modelling and Visual Support Modules (Cox & AFIRM Team, 2018; Sam & AFIRM Team, 2015). The steps were carried out as follows:

Visual schedule implemented

During the initial phase of the intervention, the 'tried and tested' visual schedule was used to expand the task to actually making the sandwich. This was supported by additional visual-based literacy activities (digital book and sequencing task). This was in consideration of the realities of the practice context, the pono - knowledge, skill and resourcing level of members of the support team (teacher and teacher-aides).



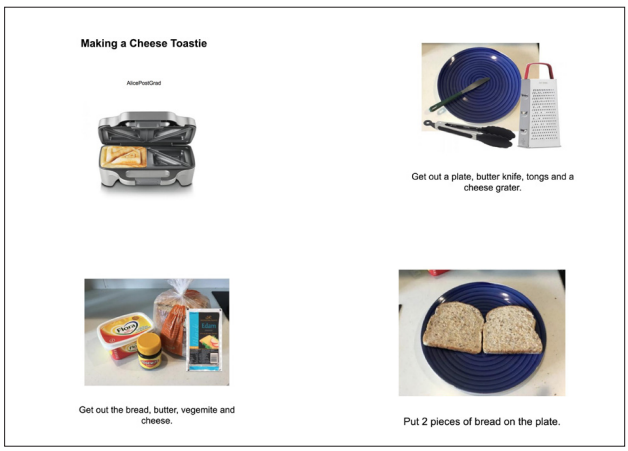


Figure 3. Examples of visual schedule and literacy supports - sequencing cards.

Prerequisite skills determined and type of VM selected

Cox and AFIRM Team (2018) recommend that during the selection of the EBP and goal setting period one must determine the learners' prerequisite skills and select the specific type of video modelling to be used.

Firstly, there was clear observational data from family and teachers that Sarah was able to imitate others. The ability to imitate influenced the decision to select 'basic video modeling' for this goal. Secondly, Sarah could perform most of the skills necessary to complete the whole target behaviour (this could be seen in the achievement of the earlier goals). Lastly, Sarah could sustain attention long enough to observe the modelled behaviour as she often attended to YouTube clips for more than one minute and showed motivation to do so at home and at school. This final prerequisite influenced the editing phase of the video model as it was felt that it would be best to keep the video under one minute in order to ensure attention.

As mentioned above, basic video modelling was selected due to the prerequisite skills of the learner but also because of the context of the intervention, specifically the time and resourcing available. Due to my limited access to the student and classroom, it was logistically easier to create the video using an adult model outside of school hours. Similarly, I was only able to implement and observe the video model once a week and, due to the constraints of the classroom, it was decided that the visual schedule and additional visual supports would continue to be used as part of the goal, alongside the video model. This can be seen as a reflection of the pono circle of evidence (Macfarlane & Macfarlane, 2013) as well as the best practice tika which supports a multi-component approach. "The best programs appear to be those that incorporate a variety of objectively verified practices" (National Research Council, 2001; Olley, 1999, cited in Simpson, 2005, p.145).

Task analysis & reinforcement

In order to prepare for both the visual schedule and video model components of this intervention, it was important to be consistent in the task analysis. This was completed to include the same known steps from Sarah's previous goal. Table 3 gives an example of the task analysis and how data was collected. Sarah was given verbal positive reinforcement as well as being able to eat the sandwich on completion.

Table 3
Task Analysis and Data Collection

Task Analysis: Making a sandwich	**27/7/18**	**27/7/18**
1. Get out a plate and a knife.	✓ I	✓ I
2. Get out the bread, butter and vegemite	✓ I	✓ I
3. Put 2 pieces of bread on the plate	× A	✓ I
4. Butter one side of bread (lid back on butter)	✓ I	✓ I
5. Add vegemite on top of butter (lid back on vegemite)	✓ I	✓ I
6. Place a piece of bread on top	✓ I	✓ I
7. Cut in half with a knife	✓ I	✓ I

I = independent A = assisted F = forgotten/skipped

Create the model and record the video

The context of intervention influenced the video equipment used. An iPad was used to record the video model, it was edited in iMovie and was shared via email and private YouTube URL with the classroom teacher, in order to make it easily accessible to the support team as well as making it easy to share with the parents and family.

The steps identified in the task analysis were recorded separately and then edited together using the iMovie software, which allowed for extraneous visual or auditory cues to be removed and the whole model to be shortened from 1:14 minutes to 54 seconds; this was in keeping with practitioners' knowledge of Sarah's ability to attend to tasks and videos. Using an iPad and iMovie also allowed for the insertion of clear and simple verbal instructions that matched the timing of actions within the video clip as well as the supporting literacy tasks such as Tar heel reader. It was decided that verbal instructions were more beneficial than written captions as Sarah's reading speed and skill has been hard to ascertain, while she is able to consistently follow direct simple verbal instruction.

Using the video model

Due to the realities of working in an active flexible learning space, the video model was implemented in a variety of environments within the classroom - all of which, however, were familiar to Sarah. Predominantly, the classroom kitchen was used, occasionally another table or bench was used. In previous tasks and intervention, Sarah had demonstrated good generalisation of environment and tools. For example, she could generalise from a photo of a specific plate to use any type of plate.

"Many students with ASD will watch the video without any difficulty; however, some may need additional prompting and reinforcement to attend to the entire video" (Cox and AFIRM Team, 2018, 'VM Brief Packet', p.11). This was certainly the case for this learner, for whom verbal and gestural prompting and reinforcement are commonplace. However, the aim of using video modelling in this intervention was to reduce the number of prompts (verbal, gestural or visual) within the target behaviour. Therefore, verbal prompts from the observer were kept to a minimum and were recorded when used.

Monitoring the intervention (outcomes)

By recording the 'level' of completion of each step within the overall task of making a sandwich, the support team were able to evaluate Sarah's achievement in line with the school's outcome scheme (as shown in Figure 4).

Outcome Evaluation:		
Beginner	Full support to complete the task	Full support / demonstration
Learner	Multiple (3 or more) Verbal and / or physical prompts to complete the task	Between 1% - 49% accuracy over --- trials
Improver	Few (2 or less) verbal and / or physical prompts to complete the task	Between 50% - 79% accuracy over --- trials
Achiever	No prompts required to complete task – fully independent	Between 80% - 100% accuracy over--- trials

Figure 4. Special school's outcome evaluation report key (included with permission)

Data was collected for eight trials over an 8 week period (this included two weeks of school holidays). During this time, Sarah's support team used the visual schedule and supporting literacy practices, as well as the 54 second video model to practise this goal. Data was collected in table form (for example, Table 3), and results were judged by observation of whether each skill within the complete task

was completed independently (I) - without further prompt, assisted (A) - with verbal or physical prompt, or if it was forgotten or skipped (F). Five of the eight recorded trials fell in the 'Improver' evaluation at 71% accurate (see Figure 4). However, in three trials, Sarah achieved the task with above 85% accuracy (without prompting).

Based on this data and direct classroom observation, Sarah's school team and her parents discussed in an individual learning plan meeting to extend the goal to: *Sarah will use video and visual supports to make a cheese toastie independently.*

After four weeks of extending the task analysis for making a cheese toastie, using Sarah's sandwich-making skills as a baseline and developing a video prompt and associated visual supports (Tar Heel Book and sequencing activities) on the request of the support team, I returned to collect data for the initial intervention goal of making a sandwich to see if the skill had been maintained. The results were consistent with the first intervention period. Over three trials, Sarah achieved 71%, 85% and 100% accuracy after watching the 54 second basic video model.

DISCUSSION

Limitations

The intervention discussed in this practice paper of a carefully-selected combination of evidence-based practices - based on the principles of the NPDC centre's model and the culturally 'informed practice' model '*He Ritenga Whaimōhio*' (Macfarlane & Macfarlane, 2013) - had some noteworthy limitations. In particular, these relate to outcomes, data collection and implementation fidelity.

Firstly, due to the circumstances of the case study, the amount of data collected was limited and the timeframe for reporting on the practice was less than desired. This intervention was carried out in the context of a post-graduate student's practicum case study in a setting outside the student's regular employment and therefore visits were limited to once a week during study leave. Similarly, an extensive and necessary 'assessment' period that involved getting to know the student, context and whanau priorities (the 'aroha' circle) was required, and this meant that less time was available for implementation.

Similarly, due to the learning context of this learner, it was not possible to ensure accurate and constant implementation of the video model in terms of the amount of verbal and physical prompting. Different team members, teachers and teacher-aides may have varied in their use of positive reinforcement and additional verbal or physical prompts.

Likewise, in the context of a senior student learning hub within a special education school, there were significant environmental factors that changed over the intervention period which will have affected implementation. This included visual and auditory distractions from other students working in the same area, and implementation in a variety of settings.

Recommendations

In order to measure effectiveness of this intervention and achieve research-quality fidelity standards, a more accurate and prolonged single-subject ABAB research design could be implemented, as discussed in the data collection chapter of the National Autism Center's 'Evidence-based Practice and Autism in the Schools' (2009).This ABAB design, "demonstrates the relationship between the intervention and the target behaviour" (2009, p.105) while taking into consideration other environmental variables that inevitably occur in a classroom context, as explained in the limitations section. Implementing a second intervention phase would allow one to assess whether it was the EBPs that impacted the target skills and behaviours rather than other environmental factors.

Table 4
Suggested ABAB (Reversal) Design Implementation Case

A: Baseline (using visual schedule)
B: Intervention (video model implementation)
A: Baseline (skills maintained?)
B: Intervention (with video model)

Another factor that would have improved this intervention was a closer relationship between the goal-design and outcome measures. One way to do this would be to use a goal attainment scaling (GAS) measure as suggested by the NPDC (Autism PDC, 2010). By carefully and accurately crafting a measurable and observable goal, an outcome scale could be simultaneously written specific to the learner, their goal and the selected EBP. This method would be suitable in a context of a special education learner that has regular individual learning plan (ILP) meetings and reviews, as it, like the outcome

evaluation discussed and used in this practice paper (Figure 4), summarises the learner's achievement based on initial level of skill performance and progress made from that level. Table 5 is an illustration of such a GAS measure.

Table 5
Sample GAS Form

Much less than expected *(Present Level of Performance)*	Dan is inconsistently performing job tasks. He needs verbal, gesture and visual prompting to complete a task. Given 3 different 4-step vocational tasks and visual supports,
Somewhat less than expected *(Benchmark)*	Dan will complete 3/4 steps independently over 3 consecutive probe days. Given 3 different 5-step vocational tasks and visual supports,
Expected level of outcome *(Annual Goal)*	Dan will complete 4/5 steps independently over 3 consecutive probe days.
Somewhat more than expected *(Exceeds annual goal)*	Dan will complete 3 different and familiar multistep (no more than 5 steps) vocational tasks using visuals supports with 5/5 steps completed independently over 3 consecutive probe days.
Much more than expected *(Far exceeds annual goal)*	Dan will complete 4 different and familiar multistep (no more than 5 steps) vocational tasks using visual supports with 5/5 steps completed independently over 3 consecutive probe days.

Source: Autism PDC. 2010. p.17

CONCLUSION

The purpose of this intervention and practice paper were not to prove categorically that visual supports and video modelling are 'effective' evidence-based practices for all learners with ASD but rather to document a process of implementation that is contextualised to the learner, family/whanau characteristics, beliefs, and priorities. At the same time, the discussion of outcome measures and effectiveness are pertinent and relevant to all practitioners and educators working with learners with ASD. Why? Because, "There is no evidence that any single model is effective for teaching every goal to all children with ASD. Models should be chosen to fit the characteristics of the child and the learning situation" (Key Recommendation 5) (Ministries of Health & Education, 2016, p.17).

In conclusion, practitioners and educators in Aotearoa New Zealand must feel competent in all three steps (assessment, implementation and outcomes) and all three culturally-responsive circles of evidence-based practice: tika, pono and aroha (Macfarlane & Macfarlane, 2013) in order to provide effective and meaningful practice in their roles walking and working alongside people with autism and their families.

Ko koe ki tēnā
Ko ahau ki tēnei
Kiwai o te kete
You hold that handle of the kete,
I'll hold this handle
And we'll bear the load together
(Mead & Grove, 2001, p.232)

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AUTHOR PROFILE

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With experience working and volunteering in the care and disability sector, I first qualified as a primary teacher in 2012. While gaining experience in the classroom I was able to work directly supporting students with autism spectrum disorder as well as other learning differences including anxiety, severe behaviour challenges and specific learning difficulties. I graduated from Massey University's Postgraduate Diploma in Specialist Teaching (Autism Spectrum Disorder) with distinction in 2018 and currently work as a Specialist Teacher within a Complex Educational Needs Unit in Christchurch.

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