

Draft Effective Practice Model

Maximising the performance of ALN
educators



Nā āheitanga ā-mātauranga,
ko angitū ā-ākonga
Building educational capability
for learner success

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Introduction

There are many factors that contribute to adult learner success, yet the instructional expertise of the educator is arguably the most important, particularly for adult learners with higher needs. Educators make important decisions about how and what to teach and these decisions have a direct impact on the quality of learning. The right choices lead to learners overcoming personal challenges, developing positive beliefs, feeling ownership and excitement about their futures, achieving, inspiring their families, and developing a desire for further education; the wrong choices lead to stagnated progress, disengagement, discouragement, and even the onset of negative beliefs about their ability to learn. Teaching decisions matter – even more when successful learning has the potential to dramatically improve an adult's life outcomes.

This draft version of the Effective Practice Model answers the question: What skills, knowledge and understandings do the very best literacy and numeracy practitioners possess? What pedagogical skills do we, as practitioners, need to serve adult learners, and what professional development do we want access to? The model is aspirational, designed to provide direction for the next phase of literacy and numeracy provision and professional development. We are seeking your feedback in order to develop a shared model that will serve the next phase of ALN provision.

The model addresses 'pedagogical effective practice'. In the context of this document 'pedagogies' are the set of teaching and learning practices that shape the interaction between educator and learner (Peterson et al., 2018). Pedagogies also include ways to organise learning, which includes being supported within a process of planning, assessing, and evaluating (Tertiary Education Commission [TEC], 2009).

The new Effective Practice model dovetails with the Capability Building model and shares the principles articulated in it:

Principle 1: The primary objective is to meet the needs of learners

Principle 2: PLD will be evidence-based and research-informed

Principle 3: PLD will incorporate Māori and Pacific Peoples' world views, knowledge bases, and values

Purpose

The purpose of the new pedagogical model is to inform the pedagogical practices of adult literacy and numeracy practitioners in Aotearoa New Zealand and develop the capability of the LLN community. The model articulates domains of effective pedagogical practice and principles for delivering effective LN provision. The articulation of effective pedagogical practices is intended to provide:

1. A model for practising educators to identify and develop aspects of their own professional practice

The Effective Practice model is designed to outline the domains of professional practice that contribute to highly effective teaching and learning. Literacy and numeracy practitioners care deeply about supporting learners and benefit from a research-informed overview of professional skills they can develop to meet the needs of learners (Condelli, Kirshstein, Silver-Pacuilla, Reder, & Spruck Wrigley, 2010; Kruidenier, MacArthur & Wrigley, 2010). Research shows that where practitioners are aware of their needs and engage with targeted professional development they make increasingly informed and effective pedagogical decisions (Le Donné, Fraser & Bousquet, 2016; National Research Council, 2012). Furthermore, educators who attend regular targeted professional development provide higher-quality instruction to learners and improve learner outcomes (Coben, 2003; Desimone, Porter, Garet, Yoon, & Birman, 2002; Green, 2010). The model provides literacy and numeracy practitioners with a research-informed model of the literacy and numeracy professional practices, thereby enabling them to identify their strengths, and domains they can develop to become more effective practitioners.

2. Guidance for content designers of professional development and learning programmes

The pedagogical model is designed to facilitate the development of the most up-to-date, effective and targeted PLD for educators. It is essential the LLN community is served by high-quality, updated professional development opportunities to meet the needs of less-skilled adult learners (Kruidenier et al., 2010). Certainly, NZ literacy and numeracy practitioners need transition from “enthusiastic amateurs” (Dennie, 2008, p. 180)) to highly skilled and effective practitioners. Outlining the domains of practice used to inform PLD ensures the quality and continuity of these offerings.

The model also enables new research for each component to be identified, and along with sector feedback, to be continuously incorporated into PLD content. This ensures that PLD

offerings are not static bodies of content but rather reflect the constant improvements being developed in the ALN sector.

The model supports a process of continuous professional development. That is, effective professional practice is presented as continuous engagement in professional development across three dimensions (discussed in-depth below). Access to the professional development is supported with a professional development infrastructure (see Figure 1). This infrastructure is underpinned by the Foundation Learning Professional Learning Standards and a content 'map' that is updated as new research is made available.

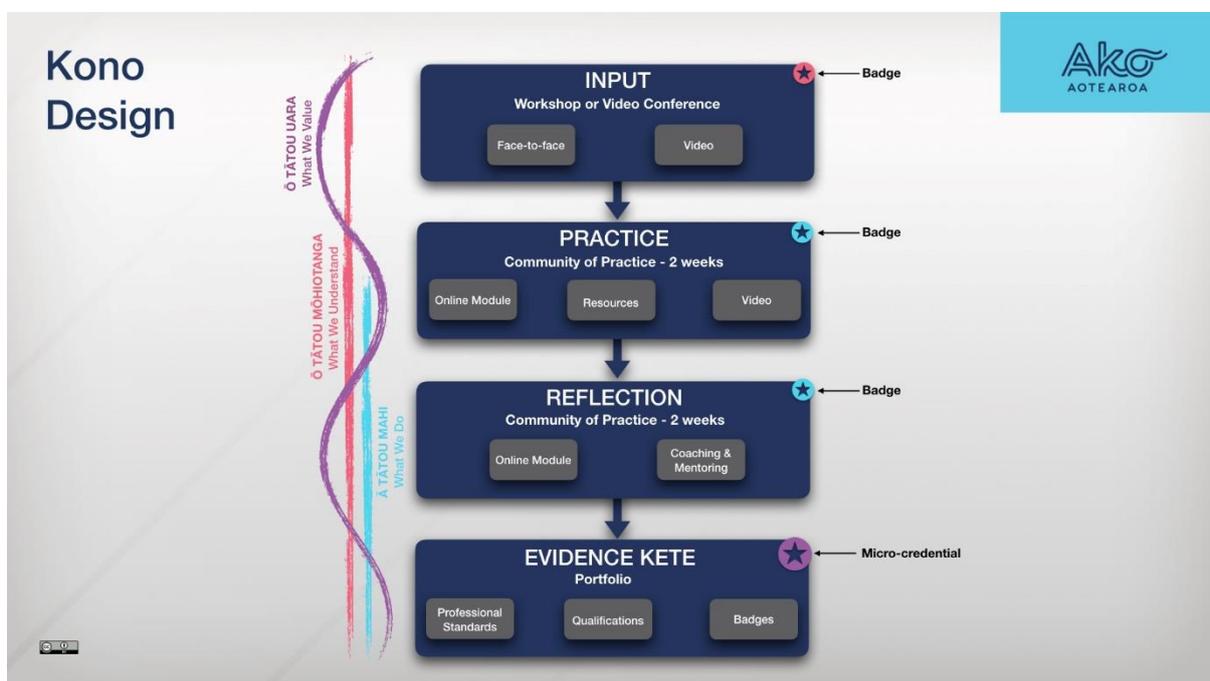


Figure 1: Kono design

3. Indicators of quality LN tuition and delivery for all levels

The Effective Practice model can be used to promote and evaluate quality literacy and numeracy pedagogical practice. While quality adult literacy and numeracy instruction is difficult to articulate precisely, there are clear principles and practices that lead to improved outcomes for learners. The model lays out pedagogical areas and practices that result in improved outcomes for learners. Therefore, educators' implementation of these and their continued growth in these areas can be viewed as an indication of quality.

Design considerations

The model's purpose is to enhance the pedagogical capability of educators to improve adult learners' literacy and numeracy skills. This is conceptualised as a triadic process of interaction between identifying learning objectives, understanding learner skills and needs, and implementing targeted strategies to develop learner skills. Thus, the model's sphere of interest extends beyond merely instructional strategies. It includes identifying broad learning objectives, analysing LN needs through the use of assessment, managing the learning environment, the relationships and interaction between educators and learners, implementing strategies and activities, and evaluating their effectiveness. It is not designed to promote any one type of pedagogy, nor should it, as highly skilled practitioners are able to select approaches based on desired outcomes, the needs of learners, the dynamics of groups and environmental constraints (Torgerson, Porthouse, & Brooks, 2005). Additionally, pedagogical approaches can reflect various paradigms which, given the diverse LLN community, should not be dictated (Yasukawa & Black, 2016). It is not the intention of the model to promote one approach over another but rather to inform how any one of these might best be implemented and outlining professional development options where practitioners can develop such skills.

The model has been developed with a view to capitalising on broad domains of LN research that are increasingly providing actionable findings to practitioners. These domains include adult numeracy, reading, writing, speaking and listening research. The importance of raising the expertise of literacy and numeracy educators through evidence and research-based findings cannot be overstated (Condelli et al., 2010). The most effective way to develop the literacy and numeracy skills of adults is to equip educators with high-quality pedagogical skills to inform their decision-making, and then, to continue to engage them in professional development (Kruidenier et al., 2010).

Foundations of the new ALN pedagogical model

The Adult Literacy and Numeracy Learning Progressions were introduced to the sector in 2008 (TEC, 2008a, 2008b). The supporting professional development and learning content utilised a pedagogical model designed around three aspects:

- Know the learner
- Know the demands
- Know what to do

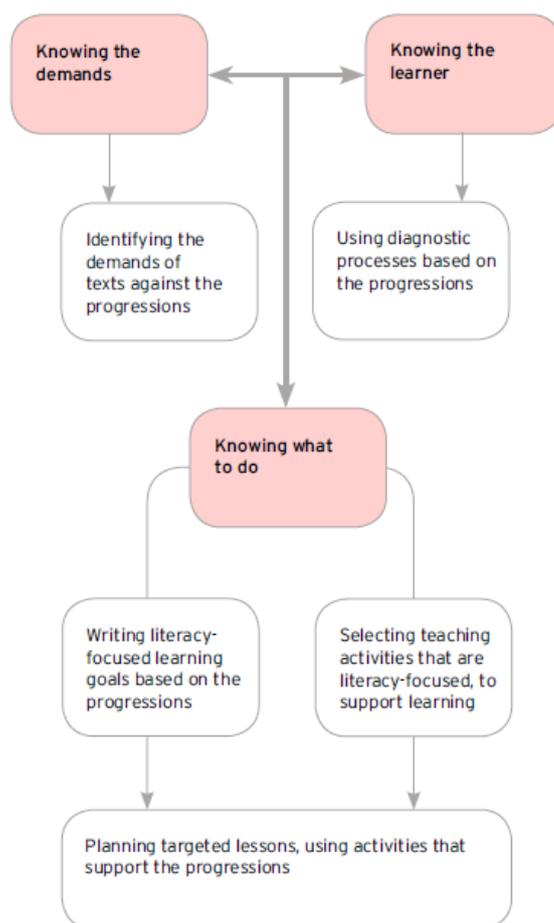


Figure 2: Pedagogical model in the Learning Progressions

The three aspects provided a structure to identify needs and strengths, plan, and deliver literacy and numeracy content. The model was accompanied with an infrastructure of supporting resources such as specific resource books to address LN strands, online content, and assessment options. Good practice was reflected in competent integration of each aspect.

The sector has evolved considerably since the Learning Progressions were developed and the pedagogical model was used to embed LN provision into practice. The three domains of knowledge remain a solid structure to build professional capability. However, a more fine-grained and sophisticated approach to pedagogical competence would serve to improve the capability of the sector. One that expands and describes domains of expertise to a greater degree, includes cultural competencies, and promotes continued improvement in each domain.

The new model maintains the structure of the old, leveraging professional development already undertaken in the sector and existing resources, but expands professional practice into new domains.

The model presents the continual development of each domain as movement toward professional practice. Effective practice is described as progression in the development of the internal three components 'know the learner', 'know the demands' and 'know what to do'. Additionally, educators can access PLD on various aspects of the outer layers to meet their specific needs or preferences.

The following section describes the domains of the model in detail.

The Effective Practice Model

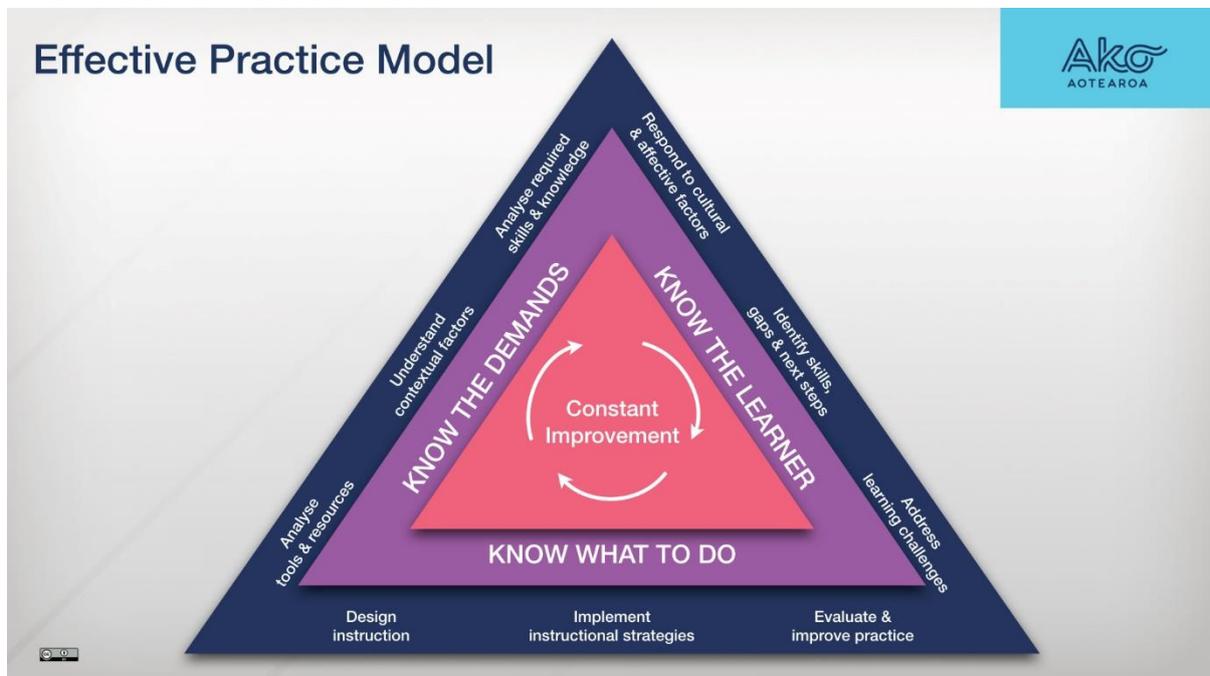


Figure 3: Effective Practice Model

Effective Practice Model

Effective practitioners...

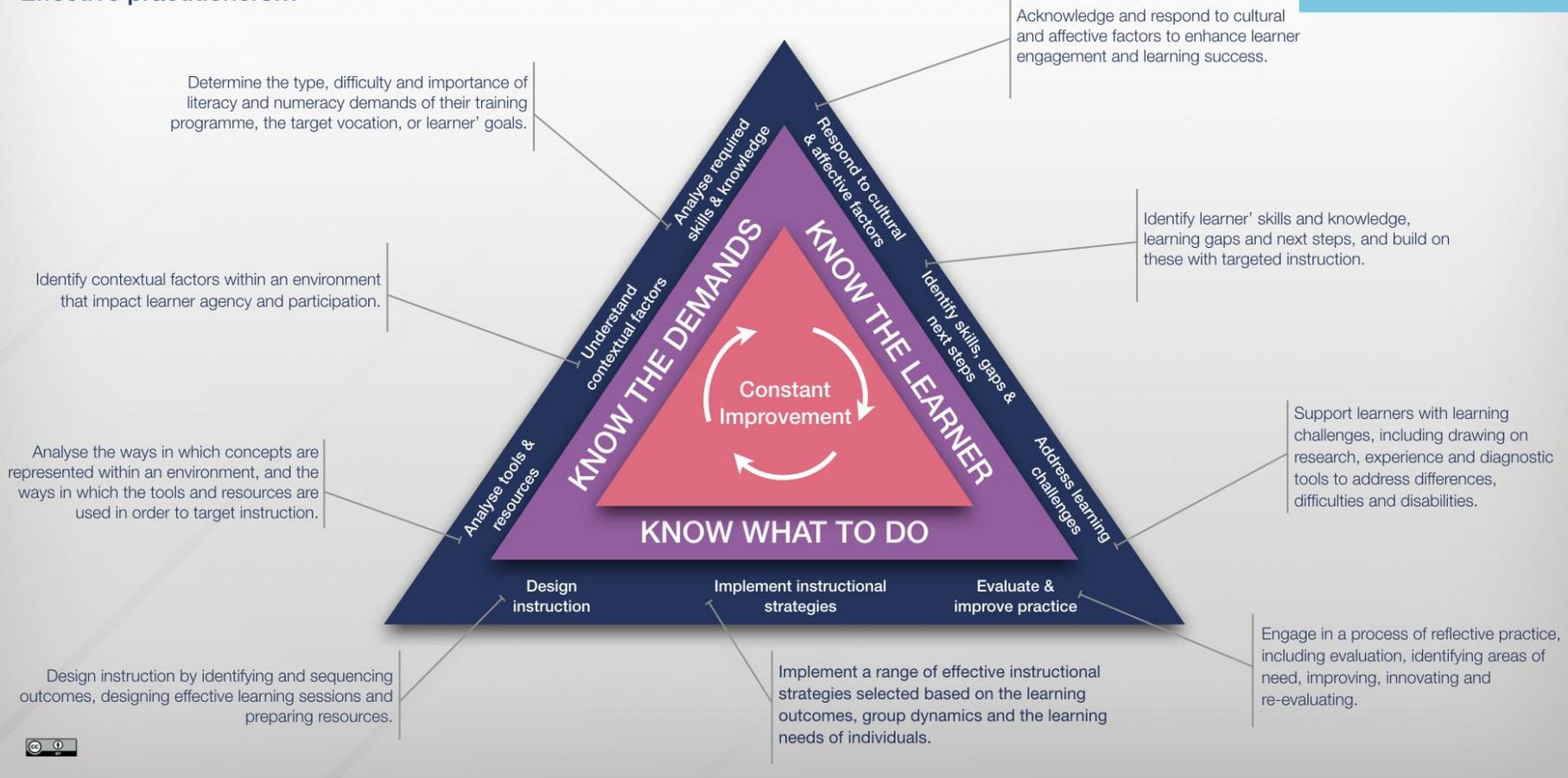


Figure 4: Overview of components

Know the learner

Adult LN practitioners meet the needs of a diverse and high-need audience. Learners come from a range of cultural, socio-economic, language, and educational backgrounds. They also have unique learning experiences leading to diverse skills and knowledge, beliefs and identities, affective responses, motivational differences, insecurities and reasons for learning. The ability of practitioners to understand and respond positively to the breadth of these factors is essential. As with the Foundation Learning Professional Standards the learner is the central consideration of the Effective Practice model. 'Knowing the learner' occupies the central position in the Foundation Learning Professional Standards as is the case in the Effective Practice model.

'Knowing the learner' is expanded into three distinct aspects:

- Respond to cultural and affective factors
- Identify skills, gaps and next steps
- Address learning challenges.

Each of these is important to understanding a learner's background, barriers and skills in order to address their needs, plan and cultivate effective learning environments, and deliver appropriate instruction.

Respond to cultural and affective factors

Learners bring diverse cultural, social and affective backgrounds and experiences with them to learning situations. Effective practitioners acknowledge these, address them and cultivate positive environments and/or relationships in which effective learning can occur. Additionally, some adult learners present with problematic histories, experiences and anxieties toward learning that can act as barriers to learning.

Cultural considerations and hallmarks of Māori and Pacific excellence

Misalignments between a learner's culture and the learning environment can perpetuate existing barriers and undermine the effectiveness of provision (Bishop & Glynn, 1999). A body of research shows that responding to learners in a culturally appropriate manner makes a substantial difference for learners (Alkema, 2014). Such a culturally responsive pedagogy is one in which the educator cultivates an environment and relationship with Māori

and Pacific learners that reflect appropriate values, understandings and knowledge, and that ensure learner success for all (Macfarlane, 2004). While these practices are framed in the context of cultural responsiveness here, similar strands are found throughout the pedagogical literature that indicate that adult learners learn best when they feel valued, connected, and supported to develop their own forms of success and agency.

Pedagogical approaches for Māori

Research shows that Māori outcomes are improved when practitioners adopt a culturally responsive practice (Bishop, 2001; Ministry of Education [MoE], 2009). These practices include creating caring relationships, cultivating positive, cooperative environments, recognising and building on prior knowledge and experiences, using feedback, and sharing power (Bishop et al., 2001; MoE, 2009; Potter, Taupo, Hutchings, McDowall & Isaacs, 2011). Research also indicates that increased practitioner knowledge of Māori culture and protocols leads to greater engagement and outcomes (Chauvel, 2014). Māori learners tend to give positive feedback about teachers or tutors who are positive, committed and supportive, are approachable, and who encourage collaboration with other learners (MoE, 2009). Research indicates that many adult Māori learners are motivated to engage with literacy and numeracy to contribute to whānau, such as supporting tamariki or mokopuna, rather than solely focusing on programme outcomes (Potter et al., 2011). Using meaningful Māori contexts and resources within curriculum and lesson design is also recommended, as well as an insistence on high standards, appropriate learning spaces, highly skilled teachers and practitioners, and opportunities for learners to discuss unsatisfactory school experiences (Greenwood & Te Aika, 2008).

These recommendations, in addition to those within the currently available Māori Cultural Capability Pathway, are drawn on to inform hallmarks of excellence for Māori pedagogy below.

Pedagogical approaches for Pacific Peoples

A key point to note is that Pacific learners come from a range of ethnicities and backgrounds and therefore no one approach is suitable for all, and no distinct 'Pacific pedagogy' is available (Alkema, 2014). However, some broad pedagogical insights are available. Pacific learners benefit from highly trained tutors who make informed pedagogical decisions, use engaging approaches, develop meaningful and trusting relationships, make connections to Pacific contexts, cultivate group support systems, create 'Pacific' friendly spaces where possible, and are culturally responsive, such as upholding Pacific values (Chu, Samala Abella, & Paurini, 2013; Fiso & Huthnance, 2012). Learner feedback suggests that classical

European transmissional pedagogical approaches, such as individual work, is less engaging and learners report benefiting more from group work and shared study opportunities. Learners also note that including Pacific contexts increases relevance, and this seems reflected in an ongoing request for the inclusion of Pacific content in curriculum and resources (Luafutu-Simpson, Moltchanova, O'Halloran, Petelo, Schischka & Uta'l, 2015; Mara, & Marsters, 2010). Likewise, Pacific success is seen as broader than programme completion, being strongly related to identity, family and community (Luafutu-Simpson et al., 2015; Tuia 2013.)

Effective literacy and numeracy practitioners can enhance Pacific success by

- aligning success outcomes with learners' own broader goals and success perspectives
- developing authentic and supportive relationships with learners
- connecting learners to learning support groups
- cultivating positive social learning opportunities and providing engaging instructional sessions.

In contrast, less effective practice might be characterised as insisting on narrow achievement outcomes, maintaining an impersonal relational distance from learners, limiting opportunities for learner social interaction and sharing, failing to include Pacific contexts or resources, and a general lack of cultural awareness, such as sitting on tables or swearing, which clashes with learners' values. The research shows that Pacific learners are highly appreciative, supportive and encouraging to practitioners who make a personal connection, are culturally aware and provide quality tuition.

These recommendations, in addition to those within the currently available Pasifika Cultural Centredness Pathways have been drawn on to inform hallmarks of Pacific pedagogical excellence.

A draft of the Hallmarks of Māori and Pacific pedagogical excellence can be found in Appendix A.

Affective responses

Many adult learners have negative personal learning histories that influence how they approach learning in adult contexts (Evans, 2000; McDonald, 2016; Whitten, 2018).

Research indicates that these lead to negative beliefs, emotions and attitudes and influence

their identities as learners. These negative affective responses manifest in a variety of ways including anxiety, fear, a lack of engagement, or avoidance strategies (Hannula et al., 2016; Whitten, 2018). Most concerning is that, left unaddressed, such responses can significantly interfere with an adult learners' performance, in some cases more so than a learning disability (Ralston, Benner, Tsai, Riccomini, & Nelson, 2014). Effective practitioners recognise and address affective responses and work to cultivate positive beliefs, agency, attitudes and emotions.

Identify skills, gaps, and next steps

Effective tuition is built upon understanding a learner's current skills and knowledge to provide targeted tuition, particularly for adults with literacy and numeracy needs (Miller, McCardle, & Hernandez, 2010). The use of diagnostic, formative and summative assessment are essential to understanding a learner's skills and knowledge, identifying strengths and needs, and tracking development as it occurs. Effective literacy and numeracy practitioners identify learners' skills and knowledge, learning gaps and next steps, and build on these with targeted instruction.

The use of diagnostic assessment is a key component of effective practice. A body of research shows that where reading, writing, and numeracy difficulties persist, instruction must be informed by diagnostic information (Cumming & Gal, 2000; National Research Council, 2012). Therefore, developing educators' use of assessment tools such as the LNAAT is important, but it is equally important to extend practitioners' capability to use the LNAAT and other diagnostic assessments to make more specific diagnosis of learner needs.

Formative assessment practices inform in-the-moment decision making, which leads directly to appropriately targeted instruction (Black et al., 2005; Hodgen, Coben & Rhodes, 2010; Hodgen & William, 2006). Formative assessment, commonly referred to as 'assessing for learning' is cited as the most effective return on investment for professional development in the adult LN domain (Derrick & Ecclestone, 2006). While this may be variable, it does underpin the importance of practitioners developing and incorporating sound formative assessment techniques into their practice.

Summative assessment informs organisational practice, pedagogical approaches, quality control measures, and informs learner goal setting and tracking of their own progress (Swain, Brown, Coben, Rhodes, Ananiadou & Brown, 2008). Effective practitioners use summative assessment to ascertain skill levels and measure progress.

Address learning challenges

Many adult learners who have low literacy or numeracy skills have learning challenges within specific domains such as reading, spelling, numeracy, or number skills (Mellard & Becker Patterson, 2008; National Research Council, 2012). Other learners may have more general learning difficulties that impact their performance across all aspects of learning. In all cases, these learners need high quality and specific instructional support, targeted to their specific needs (Chapman, Greaney, & Prochnow, 2015; Tunmer, Chapman, Greaney, Prochnow, & Arrow, 2013).

Although specialist skills are warranted, less specialised practitioners can implement a range of practical responses that address learners' needs. Research indicates that there are several common characteristics demonstrated by learners who struggle to learn (Allsop, Kyger & Lovin, 2007). While some of these characteristics require specialist remediation, a portion can be improved within the parameters of good practice. For example, the characteristics include:

1. Learned helplessness: learners do not believe they can be successful because of past experiences and give up before engaging to a degree to develop new learning.
2. Passive learning: learners do not actively engage with content, use strategies or make connections between what they know and new content.
3. Poor use of metacognitive approaches, such as evaluating whether they are learning, implementing strategies, attending to whether the strategy is effective, and making changes when needed.

Note that approaches to supporting these types of behaviours in the reading context are partially addressed within the Learning Progressions (TEC, 2008c, p. 26). Practitioners are encouraged to develop their ability to respond to such needs (National Research Council, 2012) and strategies and approaches will be included within professional development offerings. Where the learner needs are greater than can be catered for in the classroom, practitioners are encouraged to connect learners to appropriately specialised educators. Therefore, practitioners are effective when they identify where adults might have a learning challenge and provide effective instruction within the confines of their practice, and *also* connect learners to appropriate sources who can provide specialist support.

Effective *specialist* practitioners draw on international expertise, research, diagnostic assessment, tools and resources to diagnose, plan and provide instructional support that directly addresses learner needs. The sector would greatly benefit from extending capability

in these domains by providing training for specialist reading, writing and numeracy educators.

Knowing the demands

In contrast to the compulsory sector there are no curriculum documents outlining the required literacy or numeracy skills learners require to competently perform in a context. This is because adult LN educators support learners to function in diverse, complex, and dynamic environments such as workplaces, workplace programmes, embedded programmes or one-to-one tuition. A key challenge for adult LN educators is how to identify the literacy and numeracy requirements of a role, task, or vocation, unpack the underpinning skills, identify constraints and affordances, and develop a hierarchy of goals and outcomes. Thus, knowing the demands goes beyond traditional compulsory teacher requirements of curriculum knowledge into analysis of literacy and numeracy demands.

The Learning Progression resource books include specific instructional material on how to analyse demands across each of the Strands, as does the NZCALNE. However, this practice is arguably the bedrock of effective practice and therefore the sector, and learners, would benefit from raising the capability substantially.

'Knowing the demands' is represented by three aspects:

- Skills and knowledge
- Concepts, tools and resources
- Contextual factors

Analyse required skills and knowledge

Effective LN practitioners determine the nature, complexity and importance of literacy and numeracy demands of their training programme, the target vocation, or learners' self-identified goals. For example, the demands of a training programme are identified to support learners to complete the programme, *and* the LN demands of the target vocation are identified so that appropriate LN content can be included to equip the learner to function competently in the workforce. This facilitates the prioritising of outcomes and the design and resourcing of effectively targeted LN provision.

The Learning Progressions Framework enables the user to prioritise skills and knowledge, identify their complexity, and plan an appropriate learning sequence. They enable most sub-domains of LN to be identified, such as vocabulary, reading comprehension, critical skills, measurement, number skills, and writing. The model seeks to improve the capability of practitioners to use the Learning Progressions to identify LN demands and use this information to inform practicable and effective instruction.

Analyse tools and resources

Adults use their literacy and numeracy skills in conjunction with tools and resources that act as affordances or constraints to their success. For example, units used within vocations differ, as do the measurement tools, how measurements are derived, tolerances, and preferences for fraction or decimal use, and these differences can make non-complex tasks very difficult (Keogh, Maguire & O'Donoghue, 2014). Effective practitioners analyse the ways in which concepts are represented within an environment, the ways in which the tools are used, and how resources are used to support learner understanding.

Understand contextual factors

Contextual factors include aspects of an environment that impact the learner's agency and participation with tasks that involve literacy and numeracy, and cultural factors. Contextual factors include other workers or learners, their attitudes, skill sets and behaviours (Bandura, 1999), formal and informal hierarchies, norms, 'the way things are done', traditions, languages or vernacular, timeframes to complete tasks, the ramifications of completing or not completing a task, and the tolerance for accuracy. They also include cultural characteristics such as Māori or Pacific world views and traditions.

Contextual factors have a strong bearing on how adults are able to draw on their own skills, participate, and implement learning that results from instruction. For example, one employee may 'help' another lesser skilled employee take responsibility for completing a complex task. Once this informal arrangement is habitualised, the lesser-skilled learner may not have an opportunity to consolidate the required skills.

Effective practitioners are able to identify these contextual factors to identify the opportunities, challenges and dynamics that impact learner participation and development.

Knowing what to do

Effective practitioners plan their instruction, implement evidence-informed approaches where possible, select and apply engaging instructional strategies, innovate, and evaluate and improve their practice. 'Knowing what to do' is represented by three aspects:

- Designing effective learning
- Instructional strategies
- Evaluating and improving

Design instruction

Broad international research finds that effective practitioners plan their instruction by identifying and sequencing outcomes, designing engaging and effective learning sessions and preparing supporting resources where necessary. They plan the arc of their outcomes, whether they will be addressed suitably within a single lesson, several lessons, or across several months or more, and they act as effective designers of learning by selecting pedagogical strategies with a clear sense of the intended impact of their actions (Echazarra, Salinas, Méndez, Denis, Rech, 2016; National Research Council, 2012).

Effective practitioners design individual lessons to achieve clear outcomes (identified through an analysis of the demands and learner goals), learner assessment results, and the Learning Progressions framework. They also use assessment practices to determine and build on what learners already know about a topic (Black & William, 1998; Gal, Ginsburg, Stoudt, Rethemeyer & Ebby, 1994; Ofsted, 2011; Swan, 2005; Swain & Swan, 2007).

Effective practitioners act as designers of learning by selecting pedagogical approaches with a clear sense of the intended impact rather than ad hoc responses. They possess a repertoire of learning strategies and activities that can be selected based on clear goals and objectives (National Research Council, 2012; Schoenfeld, 2011). Decision making regarding these approaches is undertaken with a knowledge of effective research based pedagogical practices (Binder, Snyder, Ardoin & Morris, 2011). An example of research-based pedagogical practices recommended for delivering numeracy is provided in Appendix B.

Highly effective practitioners design learning with further learning considerations in mind, such as developing learners' self-regulated learning skills, critical skills, health, financial and digital literacy skills. While these may not be the primary outcomes of the lessons,

pedagogical choices can influence them for the better (Black, Balatti and Falk, 2013). The conclusion for the New Zealand context is that, where possible, professional development of these domains be made available to practitioners, so that they are able to make effective pedagogical choices.

Implement instructional strategies

Effective practitioners possess a repertoire of effective instructional strategies that they can select based on the learning outcomes, group dynamics and learning needs of individuals (Arrow, Chapman & Greaney, 2015; Coben et al., 2007; National Research Council, 2012). There is strong evidence to indicate that the practitioner's selection and use of instructional strategies relates directly to the quality of literacy and/or numeracy instruction (Chapman, Greaney & Prochnow 2015; Swain & Swan, 2007). The use of appropriate instructional strategies may be even more important in the adult literacy and numeracy domain because of the number of learners with high needs, negative learning experiences, and potential learning difficulties (Benseman, 2013; McHardy & Chapman, 2016; Whitten, 2018).

There is research to suggest that in the absence of professional training many literacy and numeracy educators employ only a narrow range of strategies and make their pedagogical decisions based on their observations of other teachers, their beliefs, or simply as a response to classroom pressures (Coben et al., 2007; Kendall & McGrath, 2014; McHardy & Chapman, 2016; Van Kan, Ponte & Verloop, 2013; Whitten, 2018). The concern is that these practices may not be compatible with research (Kendall & McGrath, 2014; National Research Council, 2012) and may not be sufficiently targeted to meet the needs of adults requiring literacy and numeracy support (Kruidenier, 2002; Kruidenier, MacArthur, & Wrigley, 2010; Mesa, 2010). Encouragingly, research shows that as educators engage with appropriate professional development their use of instructional strategies improves (Barrera-Pedemonte, 2016; Zengler, 2017). By including this aspect of a practitioner's professional practice within the model, practitioners can focus on developing a broader range of instructional strategies and improve learner outcomes, particularly for priority groups such as Māori, Pacific and youth.

There is a wide variety of instructional strategies, and it is not the purpose of this document to attempt to list them (For example see Appendix B list of recommended approaches for adult numeracy). Arguably, subdomains such as decoding, comprehension, critical reading, measurement, place value or proportional reasoning all have a different range of optimal strategies, hence the reason why a research-informed approach is necessary. However,

there are broad categorisations that are useful to begin discussions about what content fits the domain (Beder, Lipnevich, & Robinson-Geller, 2007; Le Donné et al., 2016).

The first are active learning strategies, instructional strategies practitioners use to engage learners in their own learning. Examples include learners working in groups, using technology such as online modules, or self-assessing.

The second are strategies that motivate learners to engage in higher-order thinking, such as critical thinking, problem-solving or decision making. These types of instructional approaches emphasise meaning making rather than learning discrete skills (Beder et al., 2007). In both mathematics and numeracy education research this approach is associated with higher performance. This is largely credited to practices such as requiring learners to solve problems in more than one way, to explain their thinking and to be innovative in their work (Echazarra et al., 2016; Le Donné et al., 2016). It is worth noting that international research finds that cognitively demanding strategies, such as elaboration and meaning-making strategies tend to result in better learning outcomes than less demanding strategies such as memorisation (Echazarra et al, 2016).

The third type of instructional strategies are teacher-directed activities such as those in which the practitioner plays a direct role in the transmission of information, such as explaining ideas or modelling skills. This mode of instructional strategy appears less effective for learning yet is frequently identified as the most common of the three (Benseman et al., 2005; Coben et al., 2007; Whitten, 2018). However, there are ways to improve this approach by utilising and integrating other types of instructional strategies as well (Coben et al., 2007).

A further component of instructional skill is the ability of practitioners to make the most of spontaneous learning opportunities that occur within lessons or one-to-one instruction. Effective practitioners make informed decisions about whether to pause a planned lesson and pursue an opportunity to engage in other beneficial content or to stay on task and come back to the topic later, or even address the topic privately with a learner at another time (Schoenfeld, 2011). Examples of such opportunities include exploring errors or misunderstandings with the class, discussing financial or health issues that might arise out of a discussion, or to explore a learner question about a particular topic or situation. The ability to make the effective decisions in such situations is a product of an educators' pedagogical and content knowledge (Lin & Rowland, 2016).

Evaluate and improve practice

Practitioners *become* effective by engaging consistently in a process of reflective practice, comprised of evaluation, the identification of areas of need, informed innovation, re-evaluation, and further improvements. This process is described in different ways across the literature but is widely considered an essential process by which new learning is integrated into practice and therefore enhanced (Usher & Bryant, 2012). Dennison and Kirk described the adult learning process as a cyclical one of “do, review, learn, apply, do, review, learn, apply” (1990). In fact, continued engagement in professional practice is a better predictor of an adult numeracy educator’s effectiveness than high levels of qualifications (Coben, 2003).

Progression in the practice of evaluation and improvement requires adopting and engaging in evaluation processes. For example, practitioners can adopt the Institute for Learning’s six-step model of continuous improvement (Johnson, 2014). This model guides practitioners through a process of reflecting, identifying needs, creating and implementing a plan, and then reflecting again.

Action research methodologies are also recommended as mechanisms to improve educators’ performance. Additionally, action research methodologies are designed to maintain balance between practical, professional knowledge and academic research.

The evaluation of personal practice and the identification of professional development needs can be undertaken in conjunction with the Effective Practice model. This will be tied into professional development opportunities and pathways that practitioners can engage with.

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Appendix A

Hallmarks of Māori and Pasifika pedagogical excellence

Hallmarks of pedagogical excellence for educators working with Māori and Pasifika learners have been identified. The hallmarks refer to evidence-based characteristics or traits defining high level educational performance, service or support when working with Māori, Pasifika and other learners.

The hallmarks define how tutors, learning advisors, and those in support roles can:

- Work effectively with Māori, Pasifika and other learners to meet learning needs.
- Provide a culturally safe environment.
- Help identify educational and other aspirations where appropriate.

These hallmarks focus particularly on Māori and Pasifika to address disparities in educational outcomes for Māori and Pasifika learners relative to non-Māori and non-Pasifika. However, increased success for Māori and Pasifika learners is not a zero-sum game. That is, it does not occur at the expense of other learners' success.

The hallmarks of excellence described here may also apply to other learner groups such as migrant or other priority groups. Equally, a focus on better relationships, more holistic pastoral care and support as well as more culturally responsive education is likely to result in increased success for all. Simply put, all learners learn best when they feel valued and secure and the right level of connectedness with their tutor and others.

Educators demonstrate hallmarks of excellence for Māori and Pasifika learner success when they:

1. Believe they can make a difference

Effective practitioners believe they can make a positive difference to educational achievement for all learners, including Māori and Pasifika; accept this as a professional responsibility, and then act on that responsibility.

2. Reject deficit theorising

Effective practitioners reject deficit theorising as a way of explaining Māori and Pasifika educational achievement levels.

3. Recognise that it's the quality of their relationships that matters

Effective practitioners recognise that the quality of their relationships and interactions with their Māori and Pasifika learners is an important influence on their learners' educational achievement.

4. Reflect on their own cultural identity

Effective practitioners reflect on their own cultural identity in Aotearoa New Zealand and work to enhance the cultural identity and well-being of Māori and Pasifika.

5. Are culturally responsive

Effective practitioners develop ways of teaching and/or supporting Māori and Pasifika learners that are culturally responsive and embedded in relationships of mutual trust and respect.

6. Reflect on holistic Māori and Pasifika practices

Effective practitioners reflect on their own Māori and Pasifika holistic cultural teaching and/or pastoral care practices.

7. Set high expectations

Effective practitioners set high expectations for Māori and Pasifika learners.

8. Identify Māori and Pasifika learners' education aspirations

Effective practitioners identify and address the educational and other aspirations of Māori and Pasifika learners.

9. Modify teaching and support based on learner outcomes

Effective practitioners promote, monitor and reflect upon learner outcomes so as to modify their own teaching and/or support in ways that lead to improvements in Māori and Pasifika learners' achievement.

10. Take an integrated approach

Effective practitioners demonstrate practices underpinned by appropriate and relevant professional values, knowledge and ongoing professional learning and development. The ALN pedagogical model situates these principles of effective practice as key aspect of literacy and numeracy instruction.

Appendix B

The following list was compiled Whitten (2018):

It is recommended that mathematical tutors of adult learners will:

- determine, and build on, what learners already know about a topic (Black & Wiliam, 1998; Gal, Ginsburg, Stoudt, Rethemeyer & Ebby, 1994; Ofsted, 2011; Swan, 2005; Swain & Swan, 2007);
- develop a community of discourse engaged in activity, reflection and conversation (Gal et al, 1994; Glass & Wallace, 2001; Mercer, 2000);
- use rich collaborative tasks and provide opportunities for group work (Askew & Wiliam, 1995; Gal et al., 1994; Swan, 2005; Swain & Swan, 2007);
- expose and discuss common misconceptions (Askew & Wiliam, 1995; Condelli et al., 2006; Swain & Swan, 2007; Swan, 2005);
- encourage reasoning, sense-making and the demonstrate the interconnected nature of mathematics rather than emphasising rote learning and getting the answer (Swain & Swan, 2007; Swan, 2005);
- use effective questioning to generate deep thinking (Askew & Wiliam, 1995; Hodgen, Coben, & Rhodes, 2010; Swain & Swan, 2007; Swan, 2005);
- address and evaluate attitudes and beliefs regarding both learning mathematics and using mathematics (Gal et al, 1994);
- situate problem-solving tasks within familiar, meaningful, realistic contexts (Gal et al., 1994; Ofsted, 2011; Swain & Swan, 2007);
- develop understanding by providing opportunities to explore mathematical ideas with concrete manipulatives or visual representations and hands-on activities (Gal et al, 1994; Glass & Wallace, 2001; Hodgen et al., 2010; Ofsted, 2011).
- Select tools and representations to support learner thinking (Zevenbergen & Lerman, 008)

Appendix C

Notes on tools and resources

Resources can act as benefits to learners or as interference. An example of a resource interference is a petrol to oil ratio chart expressing quantities in different units. This is not a problem with some employees, however for those with poor conceptual understanding the representation will interfere with the development of further understanding. Checking how resources represent concepts is an important process when working with learners with less literacy and numeracy.