

Enhancing parental involvement in student learning

Robin Averill, Abby Metson, and Susan Bailey

<https://doi.org/10.18296/cm.0016>

Abstract

There is much international evidence that parental involvement in children's learning can positively influence achievement. New Zealand policy expects schools to nurture such involvement, particularly in relation to Māori and Pasifika learners. Despite policy imperatives and valuable professional development projects, such involvement has proved challenging to embed within many English-medium school settings. We examined policy, theoretical, and research literature to identify key supports and barriers to establishing strong parental involvement in children's learning, with a particular focus on the context of mathematics. A review of literature shows that parental involvement can be nurtured by school-wide commitment, learning-focused parent–teacher partnerships, effective communication, purposeful home-based learning, and shared home and school decision making. However, establishing sustained parental involvement in learning is challenging, with time constraints, language and cultural differences, and varied expectations posing barriers. Further guidance, support, and New Zealand-based research are needed to ensure such involvement can be maximised, including investigation into the effects of such involvement on achievement, affect, and well-being, particularly in relation to Māori and Pasifika students in English-medium settings.

Introduction

New Zealand parents have much to offer to support their children's learning. Involvement of parents in the school curriculum is advocated in many countries, including New Zealand, for enhancing students' schooling experience and achievement and reducing potential barriers to learning. In particular, the cultural competencies for teachers of Māori students (Ministry of Education, 2011a) and the values within the *Pasifika Education Plan* (Ministry of Education, 2013a) highlight the importance

of family for these students. New Zealand schools are encouraged to establish effective home–school partnerships focused on aligning teacher and parental supports for students’ learning (Alton-Lee, 2003; Education Review Office, 2015a).

The benefits that can result from parental involvement with their children’s learning are described in both theoretical and research literature. Known benefits from parental involvement in students’ learning in general, and in mathematics learning in particular, include increased motivation to learn, enhanced achievement, and positive effects on attendance (e.g., Anthony & Walshaw, 2007; Biddulph, Biddulph, & Biddulph, 2003; Harris & Goodall, 2008; Robinson, Hohepa, & Lloyd, 2009; Sheldon & Epstein, 2005; Tuuta, Bradnam, Hynds, Higgins, & Broughton, 2004). Further benefits of strong parental involvement in their children’s learning include greater parental confidence in interacting with the school and helping their children, improved parent–child relationships (Bernie & Lall, 2008), and stronger interest of parents in furthering their own education. Also identified is increased parental understanding of the school mathematics curriculum (Anthony & Walshaw, 2007; Civil, 2006). However, parental involvement can also result in negative effects on learning, such as when teacher–parent or school–family relationships are poor or when parental help with homework is poorly informed (Robinson et al., 2009), indicating careful planning, management, and monitoring are important.

Several strategies and initiatives, such as developing a sense of family connection and working towards shared goals, have been used in New Zealand schools to help move beyond one-way after-the-event communication with parents towards developing strong parental involvement in learning (Education Review Office, 2015a, 2015b). However, such developments can be challenging to instigate and maintain (e.g., Fisher & Neill, 2007, 2008) and little research exists that examines how such initiatives can be built and sustained over time and the ongoing effects they may have for participants, particularly in New Zealand and in the area of mathematics learning. Mathematics is studied by most students across the school system. Given the importance of successful mathematics learning for enabling career options and academic advancement, current educational policy and priority areas in relation to learners of Māori,

Pasifika, and low socioeconomic backgrounds (Ministry of Education, 2012), and the persistent achievement differences on traditional measures by ethnicity and socioeconomic status (e.g., Gilmore & Smith, 2011; Ministry of Education, 2014a), such investigation is timely and important.

Here we report on an extensive literature review carried out to explore how the involvement of parents and families in school learning programmes can be enhanced. We interpret “parental” to include parents, whānau, and caregivers: the adults and others in learners’ homes responsible for children’s care, nurture, and support. Our focus is on learning programmes implemented by schools, which we refer to as the school curriculum. We acknowledge that the literature on parental involvement is highly context-specific and hence the contribution of the international literature in relation to deep insight into what works for students and families in New Zealand, and Māori and Pasifika students and parents in particular, is likely to be limited. However, the international literature provides useful ideas for consideration and discussion, particularly given the wide variation across New Zealand school contexts in relation to many factors, such as socioeconomic status, size of school, language of instruction, and whether the school is a state, private, or integrated institution.

We sought strategies that have been used to involve parents and families in the school curriculum in general and in mathematics in particular, and common themes in relation to factors that led to such involvement being successful or unsuccessful. Firstly, we describe our search methods and criteria and define how we use the term “parental involvement”. Next, we describe the policy for, understandings about, and current practices used for involving parents in school curricula, and outline the support for and barriers to such involvement. We examine these and describe promising initiatives in light of aspects of a model used internationally in relation to parental involvement in education, Epstein’s (2001) model of overlapping spheres of influence. Epstein’s model was chosen because of its widespread use, including in New Zealand reporting, such as the extensive literature review by Biddulph et al. (2003). We finish by discussing the implications of our findings.

We searched a range of databases, including Proquest and Scopus, for suitable theoretical and research literature, and sourced further

publications, including policy documents, from a range of New Zealand websites (e.g., Ministry of Education, 2015a, Education Review Office, n.d.; New Zealand Council for Educational Research, 2015). Search terms, used alone and in various combinations, included: parents, parental involvement, parent engagement, home–school partnerships, whānau, and mathematics. The references of sourced articles were used to identify further literature. The search resulted in the identification of 148 sources, 35 on or related to educational policy, 77 theoretical and empirical sources (including research reports, articles, books, and book chapters), and 37 educational websites. To limit the search and maximise relevance, most of the literature selected was published from the year 2000. Themes such as key features, findings, strengths, and weaknesses were identified across the sources along with data about the project or study (e.g., location, size, school level/s and curriculum area/s, type of study/project, method) with all results tabulated. The tables were then searched by keyword and focus area to identify overall themes across the projects and studies, with decisions and results discussed and negotiated across the review team. In this article, we draw from the literature to focus on the diversity of interpretations, supports, and barriers to parental involvement in learning. We draw particularly from international and New Zealand-based literature reviews and research studies, New Zealand policy, and international and New Zealand resources related to mathematics teaching and learning. We found very little research literature which focused specifically on developing parental involvement with Māori or with Pasifika parents.

A problematic diversity of terms and interpretations

Obstacles to examining parental involvement in the curriculum in research and practice include the wide range of terms that have been used to refer to parental involvement, and that many terms are used interchangeably. Many definitions of parental involvement have been school-centred rather than encompassing a broader range of behaviours that influence cognitive development and achievement or drawing on parents' funds of knowledge and the other contributions they can make to their children's schooling (Bernie & Lall, 2008). Some terms hold common understandings across authors. For example, in relation to parental involvement, the aspirational term *partnership*, used in New Zealand and international

settings, is commonly accepted as suggesting that families and schools are on an equal footing and both contribute to the educational success of students (e.g., Anthony & Walshaw, 2007; Bull, 2009; Bull, Brooking, & Campbell, 2008; Epstein, 2011; Hornby & Lafaele, 2011). However, other terms such as *involvement*, *engagement*, and *participation*, all of which are frequently found in both education policy and related literature, are used with a wider range of interpretations (Goodall & Montgomery, 2014), with expectations of little to large amounts of parental interaction and input into children's learning. Particularly relevant in New Zealand is the diversity of understandings in literature and day-to-day usage of what constitutes families, family attributes and processes, community factors, and parental roles (Biddulph et al., 2003).

The similarities and differences in the use of such terms and the implications of the ideas encompassed within them for teachers, schools, and parents also differ in the literature, as does the scope of practices such terms are used to encompass (e.g., Bakker & Denessen, 2007; Desforges & Abouchaar, 2003; Fan & Chen, 2001). For example, in their meta-analysis of 25 studies on parent involvement and student achievement, Fan and Chen (2001) found that the umbrella term "parent involvement" included a wide range of activities and values, making comparisons across studies difficult. They used a continuum of approaches, from involvement related specifically to school (such as communicating with teachers, helping with homework, or involvement in school governance), involvement that had elements related to both school and homes, to involvement targeted solely at students' homes (such as setting up a home environment supportive of learning and supporting parenting in general), to describe the diverse examples of parental involvement found across the studies. Continua of parental involvement have also been used by others, such as Goodall and Montgomery (2014), who draw from a wide range of literature to outline parental involvement, ranging from their ideal, of incorporating parent-devised and parent-led discussions and activities related to children's learning, to parents interacting at the whole-school level. They highlight the importance of focusing on parental engagement with student learning rather than on their involvement with school.

The issue of diversity of terms relating to parental involvement, engagement, and partnership in children's learning highlighted in the

literature indicates the importance of shared discussion and understanding of terms within school, professional development, and research contexts.

A model of parental involvement

One of the most commonly used models to describe partnerships between families and schools is Epstein's overlapping "spheres of influence" (1995, 2001, 2011). The model is learner-centred, consistent with our national curriculum (Ministry of Education, 2007). In addition, the model's three overlapping spheres of "family", "community", and "school", the contexts that students exist within and are influenced by, are relevant for New Zealand children.

In Epstein's (2001) model, involvement between families and schools is described within six areas: parenting, communicating, volunteering, learning at home, decision making, and community collaboration. Our use of the term parental involvement in this article draws from three of these areas (communicating, learning at home, and decision making); those most prevalent in the literature in relation to the engagement of parents in the school curriculum. Epstein (2011) describes *communicating* as information about the learner and what is happening in the school moving in both directions between home and school; two-way communication being particularly important for meaningful, effective partnerships. *Learning at home* is described as teachers and schools assisting parents to help their children with schoolwork and other school curriculum related activities at home. The *decision making* descriptor is used to encompass ways in which parents have representation and input into school and school curriculum decisions.

In relation to communicating, both New Zealand policy and research reports emphasise that relationships between teachers and parents must be respectful and non-judgmental (e.g., Biddulph et al., 2003; Bull et al., 2008; Education Review Office, 2008). Two-way communication (rather than solely teacher to parent communication) assists students' learning (Bull et al., 2008), and ways of communicating with parents must suit the community (Education Review Office, 2008). Consistent with the learning at home category, policy and research literature suggest that effective parental involvement in children's learning happens in the

home (e.g., Bull et al., 2008; Fan & Chen, 2001; McNaughton, 2016; Ministry of Education, n.d.-a, n.d.-b). Home activities can include parents and children playing mathematics games, shopping, cooking and doing other mathematics-related activities together, reading together, and parents supporting children's homework (e.g., Epstein 2001; Ministry of Education, n.d.-c; Van Voorhis, 2003, 2011). Teachers helping parents understand school curriculum changes, such as changes in mathematics learning approaches (e.g., Ministry of Education, 2008a), is important for enabling home-based mathematics learning support for children (Fisher & Neill, 2007, 2008). While a range of research and policy support material is available in relation to communicating and learning at home, we have found little relating to parental involvement in school curriculum-based decision making in mathematics, indicating exploration of this area would be helpful for informing development of greater understanding of the nature of parental involvement and input in support of learning.

While Epstein's model describes areas of involvement between parents and schools, we also need to consider what may lead to parents' decisions regarding whether or not to be involved in their children's learning. Hoover-Dempsey and Sandler (1997) describe three factors that can influence such decisions: parents' construction of their role as parent, their sense of efficacy, and the opportunities offered by the school and the child for parents to be involved. Consideration of these factors can aid understanding of the supports for and barriers to parental involvement in school curricula and inform teacher practice. For example, schools need to help ensure that parents believe that being involved and engaged in their child's education is part of their role as a parent so that they will be more likely to seek and take up such opportunities. Similarly, schools may need to encourage parents to realise that their involvement with their child's learning will be useful, such as through managing regular, engaging opportunities for parents' involvement which parents can find productive and enjoyable, so that they will make the most of opportunities to do so. However, further to these factors at the level of the individual parent, practical considerations, such as whether parents can take time out of work and their other commitments to attend meetings, are important considerations in determining engagement timing and location. Considered alongside Epstein's (2001) areas of communicating, learning

at home, and decision making, schools' attention to Hoover-Dempsey and Sandler's (1997) factors is likely to positively affect the quantity and quality of communication between parents, teachers, and schools, and parents' input into children's learning at home. All are also likely to affect the extent to which parents feel it is within their role to be involved in curriculum-related decision making, and whether they are likely to feel invited, capable, and empowered to do so.

Policy perspectives

We use the word *policy* to encompass documents and resources provided by the government bodies responsible for overseeing education to guide school and teacher practice. Both international and New Zealand education policy strongly encourage parental involvement in their children's education. For example, involving parents in education is one of six key areas in the No Child Left Behind policy of the United States (Pomerantz, Moorman, & Litwack, 2007), and in England, giving parents a voice and encouraging parental partnerships with schools are highlighted as essential (Desforges & Abouchaar, 2003). As in the theoretical and research literature, many terms are used in policy documents in relation to parental involvement, with terms used in a variety of ways.

New Zealand schools are required to report to parents on students' academic progress (Ministry of Education, 2013b, 2015b), but such reporting has traditionally often been predominantly one way (i.e., from schools to parents), and generally occurs after the teaching of curriculum content being reported on has been completed. In addition, many New Zealand policy documents highlight expectations of parental involvement in learning. Policy implies that parents have a responsibility to be involved in their children's education to enhance learning and motivation to learn, and schools have a responsibility to enable this, as shown by the strong wording used:

Educational success requires a child's community to be actively involved. Responsibility must be shared across these communities and by early childhood educators, schools and teachers, families and whānau. (Ministry of Education, 2014b, p. 13)

Enhancing parental involvement in student learning

Effective partnerships between parents and education professionals will improve the well-being, behaviour and achievement of children right into adulthood. (Ministry of Education, 2014b, p. 21)

Policy statements show that two-way agentic parent–school communication is desirable and expected. The community engagement principle of the New Zealand curriculum states that curriculum “connects with [children’s] wider lives, and engages the support of their families, whānau, and communities” (Ministry of Education, 2007, p. 9). Schools are expected to “provide clear statements of learning expectations ... stated in ways that help teachers, students, and parents to recognise, measure, discuss, and chart progress” (Ministry of Education, 2007, p. 39). Parents “should feel able to contribute information based on their knowledge of their child” in reciprocal exchanges of information “aimed at improving student learning” (Ministry of Education, 2011b, p. 28). Clarification regarding the use of the term *engagement* is offered only indirectly in the curriculum and other policy through the use of words such as *partnership*, *actively involved*, and *shared*.

Strongly worded statements are also seen in policy relating to Māori learners (e.g., Ministry of Education, 2008b), reflecting the philosophy that “learning is more effective when whānau are valued partners in the education process and when educators and whānau are open to learning from and with one another” (p. 29). Partnership between teachers, schools, and parents is implicit in the concepts of *ako*, *wānanga*, *whanaungatanga*, *manaakitanga*, and *tangata whenuatanga*, expressed as “cultural competencies” put forward for teachers of Māori students (Ministry of Education, 2011a). The examples of whānau voice used to demonstrate how the cultural competencies play out in practice are consistent with Epstein’s (2001) areas of communicating (e.g., “our perspectives and our values are respected”, p. 11; “we talk with teachers regularly about our children’s learning”, p. 15), learning at home (e.g., “they do a good job of linking what they teach to things our kids can relate to”, p. 13; “we know what our children are learning at school and can support them at home”, p. 15), and decision making (e.g., “we determine the type of information we want to receive about our children’s learning and also how that information is provided ... we can make decisions about the learning programme”, p. 15).

The importance of parental involvement in learning is also highlighted in the Pasifika Education Plan (Ministry of Education, 2013a), in particular through the key values of family, belonging, and reciprocal relationships, the emphasis on intergenerational interaction, and by “Pasifika learners, parents, families and communities” being placed together at the centre of the plan’s schematic diagram (p. 3). The central place of family in policy related to Pasifika learners is also shown in statements such as in how implementation of the plan will achieve Pasifika student success:

Data and information will be used to increase the knowledge and voice of Pasifika learners, parents, families and communities, so they can demand better outcomes and influence the education system from within. (p. 3)

These policy statements set an agenda of expectation that Māori and Pasifika parents and schools will foster increased parental involvement, in support of student learning, and for changes in the nature of school–parent relationships and engagement.

Looking at policy in relation to mathematics, the importance of mathematics being learnt and understood in relation to real-life contexts is emphasised both in the curriculum descriptor of the learning area (e.g., “investigating, interpreting, explaining, and making sense of the world in which they live”, Ministry of Education, 2007, p. 26) and the prefacing phrase to the achievement objectives:

In a range of meaningful contexts, students will be engaged in thinking mathematically and statistically. They will solve problems and model situations ...” (Ministry of Education, 2007, fold out pages)

Through such wording the curriculum emphasises that life outside of school is rich in realistic mathematics learning experiences, and so is ideal for developing mathematical thinking and the understanding that mathematical ideas are important in everyday life, indicating that parents have much to offer in assisting with their children’s mathematics learning.

Returning to Epstein’s (2001) areas, communicating is strongly emphasised in New Zealand’s education policy, and parental involvement in decision making is either stated or implied in a range of policy documents. There is little specific policy content in relation to learning at home, perhaps

because this aspect may be more closely related to schools' curriculum implementation, the responsibility for which is devolved to individual teachers through school policies.

To be effectively implemented and accepted by all stakeholders, policies must not only align well with society's values and, for culturally specific policies such as described above, with the values of respective groups, but they should also be consistent with research and informal school-based evidence and beliefs. The guidance, supports, and resources needed to implement policies must be available. Strategies for implementing these policies drawn from examples of exemplary practice in New Zealand schools include whole-school developments; parents and teachers working towards common goals and contexts in which participants understand their rights and obligations; and teachers seeing themselves as part of the wider community (e.g., Education Review Office, 2015a, 2015b). However, although policies and resources (including mathematics-specific resources and home-school numeracy partnerships), have been promoted and available for some time, few schools have managed to maintain strong sustained school-parent mathematics curriculum partnerships to date (Eyers & Young-Loveridge, 2005; Fisher & Neill, 2007, 2008; Hornby & Lafaele, 2011). Widespread problems with policy implementation suggest that the policy is difficult to implement, that further resources are needed, or that schools or parents have not yet prioritised implementation.

Mathematics education

The crucial role of teachers in establishing parental involvement in childrens' mathematics education is strongly stated in Anthony and Walshaw's (2007) extended literature review:

As the principal agents of mathematics education, teachers have an obligation to work with parents and community to develop an understanding of the relevance for future, informed citizenship of mathematics at school and in the home. (p. 160)

Many resources designed for parents and teachers for facilitating parental involvement in their children's mathematics learning are available, particularly for year levels 1–8 (e.g., Ministry of Education, n.d.-a, n.d.-b).

However, the ways and extent to which such information and resources are being used and their effectiveness for developing partnership and for enhancing students' learning have not yet been closely examined.

There is a long history of attempts to involve parents in mathematics learning in New Zealand and internationally, but documentation of these efforts is limited (Muir, 2012). Exceptions include the Family Maths project¹ (e.g., Stenmark, Cossey, & Thompson, 1986), used since the 1980s across many countries, and a home–school numeracy partnership project (Ministry of Education, n.d.-b), initially carried out in 40 schools across two consecutive years. To help build partnership between school and community, the project involved a lead parent and lead teacher working together to facilitate workshops for parents on school mathematics. Schools in the project reported that they re-evaluated how they interacted with their communities, but two-way school–community communication was generally not achieved, with barriers identified by participants including that not all teachers in each school were involved and each school received funding for only one year (Fisher & Neill, 2007, 2008). Considering the home–school numeracy project in light of Epstein's (2001) areas of parental involvement, communicating was supported by partnering lead teachers and lead parents and through the shared workshops, but was limited by not all being or feeling involved. Learning at home was nurtured by parents knowing more about the school mathematics curriculum. Decision making was generally led by the lead teacher and lead parent, potentially diminishing the involvement of school leadership and other teachers and parents, and a shared sense of ownership of the development.

Focusing on developing academically focused home–school partnerships with a small group of students and their parents can also be successful, as shown in a recent New Zealand-based intervention study (McNaughton, 2016). Involvement strategies were co-constructed with each family specifically to meet the individual student and family needs, aligning well with all the three of Epstein's (2001) areas of communicating, learning at home, and decision making. Scaling up such an intervention would require consideration of ways in which a larger number of, or all, students and their parents could be involved in such targeted discussions, and how the identified needs could then be met.

Supports for parental involvement in learning

Programmes that are most likely to be successful in securing parental involvement in support of the school curriculum incorporate a range of factors; these factors include having group as well as individual contact; building on rather than undermining family practices, including specific rather than general suggestions; and ensuring that families are “treated with dignity and respect” (Biddulph et al., 2003, p. vi). Factors that can support effective parental involvement and partnerships between schools and families include schools having leadership that prioritises partnership development, a culture that supports teachers’ involvement of parents, and parents and schools having shared goals for the partnership (Education Review Office, 2008, 2015a; LaRocque, Kleiman, & Darling, 2011; Mutch & Collins, 2012).

Strong commitment by school leaders to integrate parental involvement within the culture and structure of the school, rather than as an add-on to busy school activities, is crucial to forming effective partnerships between schools and parents (Crozier & Davies, 2007; Fisher & Neill, 2007, 2008; Harris & Goodall, 2008; Robinson et al., 2009). Such leadership and integration, through parent and student workshops and interactive homework (in which parents had specific roles), was found to improve mathematics achievement in the Ocean Mathematics Project in the United Kingdom (Bernie & Lall, 2008). Parents knowing specific ways that they can be involved in the school and in their children’s learning (e.g., interactive homework, teacher requests for parents’ knowledge on classroom topics) have also been found to promote successful partnerships (e.g., Hoover-Dempsey & Sandler, 1997; Parkinson, Doyle, Cowie, Otrell-Cass, & Glynn, 2011; Rodriguez, Collins-Parks, & Garza, 2013).

Tātaiako (Ministry of Education, 2011a) is useful for supporting schools’ efforts to enhance parental involvement in school curricula through providing ideas about how whānau can be involved in their children’s learning. For example, schools can use the examples of whānau and learner voice from each teacher competency (e.g., “I have good discussions with the teachers about my child’s learning”, p. 7; “The school/ECE service respects and embraces Māori language and culture”, p. 11) as a check on their practice. Similarly, the *Pasifika Education Plan* (Ministry of

Education, 2013a) describes Pasifika values (reciprocal relationships, service, family, belonging, service, leadership, spirituality, love, and inclusion) important for teachers and schools to understand and consider in light of both critiquing their teaching programmes and working to enhance parental involvement in school curricula.

Epstein's (2001) categories of communication, learning at home, and decision making are inherent in situations in which parents and schools have shared goals and do shared work towards these, enabled by school leadership that prioritises home-school links. However, enacting good intentions in ways that support parental involvement and genuinely place parents and schools in partnerships to support learning has not proved to be easy.

Barriers to parental involvement

Many barriers can hinder or prevent teachers' and schools' attempts to involve parents and whānau in their children's learning or diminish its effectiveness. Barriers discussed here relate to inconsistencies and lack of specific direction in policy and the curriculum (Ministry of Education, 2007), teacher preparedness, language and cultural barriers, and parents' views of education. All have the potential to hinder establishing and maintaining effective communication and shared decision making between teachers and parents, and limit learning at home.

Barriers to the development of effective partnerships between teachers and schools and parents and families include "[i]nconsistency within different sections of education legislation and differences between government policy and action" (Hornby & Lafaele, 2011, p. 48). For example, policies that set up competition between schools may result in school energies being directed away from engaging parents and families with their children's learning. Differences between policies and action is found when considering the consistent messages in New Zealand educational policy regarding parental involvement in children's learning (e.g., Ministry of Education, 2011a), but a lack of clear guidelines for schools for establishing and maximising the effectiveness of parental involvement. Teachers are thus expected to shoulder the responsibility of involving parents while initial teacher education and professional

development in this area may be limited (Hornby & Lafaele, 2011). In addition, teachers' mind-sets about their role, tensions between school and parental agency for teaching and engagement, and varied perceptions about suitable locations for parental engagement have been identified as further barriers to increasing parental engagement in students' learning (Goodall & Montgomery, 2014).

Even when professional development is in place, developing such involvement is challenging. For example, barriers to nurturing parental and whānau involvement in school decision making, including difficulties in establishing relational trust, mechanisms for strengthening community engagement, and shared responsibility for student learning, were found in the evaluation of the He Kakano professional development project (University of Waikato & Te Whare Wānanga o Awanuiārangi, 2010; Hynds et al., 2013). School leaders identified difficulty in understanding policy statements (such as "achievement as Māori") as a barrier to enhancing their responsiveness to learners and their whānau (e.g., Averill et al., 2014; Hindle, Hynds, Averill, Meyer, & Faircloth, 2016). Leaders also identified needing greater understanding of how to develop co-constructive approaches for learning and communication and stronger personal understanding of te reo me tikanga Māori to help them implement policy and nurture home-school partnerships with Māori parents and students (Averill, Hynds, Hindle, & Meyer, 2015), sentiments borne out by data from classroom observations and interviews with students and whānau (e.g., Hynds, Averill, Hindle, & Meyer, 2016).

Language differences between parents and schools have also been found to pose a barrier to involving families in students' learning and the school community. For example, when the main language or languages used by parents are different to the languages used in school, interaction between the school and parents can be difficult (Crozier & Davies, 2007; Fisher & Neill, 2007; Sheldon & Epstein, 2005). Parents whose first language is not used at the school may have difficulty communicating with the school, a disadvantage potentially compounded if they attended a school different in structure, process, or curriculum from that of their child.

Teachers' perceptions of parents also have the potential to hinder strong parental involvement in learning, with some teachers expecting parents

to hold much the same ideas, beliefs, and priorities as they themselves do (Reay, 1998). Comments from interviews in Crozier and Davies' (2007) United Kingdom study involving Bangladeshi and Pakistani parents and students shows further considerations in relation to teacher perceptions. Parents reported seeing their role as providing a supportive home environment rather than having any direct involvement with learning and they did not think their children's school expected much of them. Parents stated that schools had not made their expectations of parents explicit. In addition, the student interviews showed that students often did not want their parents involved in their learning.

Barriers further to those already identified in relation to education in general have been found to affect parental involvement in their child's mathematics learning. Particularly as the content becomes more advanced, some parents report feeling unable to help their children with mathematics because they themselves are not confident in their mathematical knowledge (Bryan, Burstein, & Bryan, 2001; Sheldon & Epstein, 2005) or of how it is being taught (Civil, 2006; Gal & Stoudt, 1995; McNaughton, 2016). Another tension is experienced from changes in the mathematics curriculum over time. Parents have been found to prefer the methods taught to them while their children prefer the ones they are taught (Muir, 2012), making parental help for mathematics learning problematic. In addition, parents who have had negative experiences with mathematics in their own schooling can be reluctant to engage with this subject in their children's education (Fisher & Neill, 2007, 2008; Muir, 2012; Rodriguez et al., 2013). In addition, there may be further barriers to parental involvement which are yet to be explored, such as whether any cultural understandings teachers may need for engaging with families and whānau regarding children's mathematics learning are in place.

Conclusion

In summary, policy, research evidence, and theoretical models are united in calling for schools to nurture strong parental involvement in their children's learning. Such calls are echoed in the mathematics curriculum and literature. Claimed benefits of such involvement include increased student motivation and achievement and strengthened parental

involvement with school. Policies relating to the teaching and learning of Māori and Pasifika students in particular appear to be strongly consistent with the ideas in Epstein's (2001) areas of parental involvement—two-way home–school communication, supporting learning at home through engaging in curriculum-related activities, and incorporating parental input into curriculum decision making.

Barriers to strong parental involvement in learning are many, including variation in terminology; inconsistencies across, and confusion regarding, policy; diverse perspectives of the purpose and nature of parental involvement; language and cultural differences between schools, parents, and students; lack of professional development; and varied parental confidence with curriculum content and pedagogies. However, many factors are known to support strong parental involvement, such as school leadership which prioritises welcoming parental input into learning, shared goal setting, respectful relationships, and using processes that fit well with family practices.

Policy intentions in relation to parental involvement in their children's learning are yet to be fully realised in many schools in New Zealand. Guidelines for nurturing teacher–parent links in relation to the school curriculum, and time and funding for implementation, are needed. We identified few projects that specifically targeted raising the achievement of priority learners through developing parental involvement and whanaungatanga in relation to mathematics. Given the unique demographic and cultural perspectives in New Zealand school communities and ongoing inequity of access to mathematics achievement, we believe further investigation into parental involvement and the effects of such involvement on achievement, affect, and well-being within New Zealand English-medium contexts is vital. We need to understand more about how parents, whānau, and families can be constructively included in supporting their children's learning within school mathematics curricula in New Zealand to maximise children's learning opportunities and for policy to be implemented. Further consideration of the literature focused on culturally responsive and culturally sustaining practice is important for informing such work.

This article adds to the literature in three main ways. It summarises key considerations for the establishment and maintenance of efforts to maximise parental engagement in school-based curriculum decisions, in particular in relation to mathematics learning. It presents results from policy and literature in light of a widely used model of parental engagement (Epstein, 1995, 2001, 2011) and, through doing so, sheds light on supports and barriers to school curriculum-related parental involvement practices. Thirdly, we have discussed some ways in which to implement policies that focus on maximising the engagement in learning and achievement of learners who are currently underserved. The findings show that establishing strong parental involvement in children's learning is not straightforward, particularly in relation to the mathematics curriculum. Deliberate, concerted, and sustained efforts are required to develop and maintain effective parental involvement in New Zealand children's learning and to achieve greater consistency in associated student opportunities within and across schools. This article provides key considerations towards these goals.

Note

1 For example, <http://www.familymaths.org.nz/>

Acknowledgements

We are grateful to Dr Dayle Anderson and Dr Azra Moeed for their valuable advice and input in relation to the scope and processes used for the literature search described in this article. Our thanks also to the Victoria University of Wellington Summer Scholar Scheme and the Victoria University Foundation for funding which enabled the investigation described in this article.

References

- Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Wellington: Ministry of Education. Retrieved from https://www.educationcounts.govt.nz/_data/assets/pdf_file/0019/7705/BES-quality-teaching-diverse-students.pdf
- Anthony, G., & Walshaw, M. (2007). *Effective pedagogy in mathematics/pāngarau: Best evidence synthesis iteration*. Wellington: Ministry of Education. Retrieved

Enhancing parental involvement in student learning

- from https://www.educationcounts.govt.nz/__data/assets/pdf_file/0007/7693/BES_Maths07_Complete.pdf
- Averill, R., Hindle, R., Hynds, A., Meyer, L., Penetito, W., Taiwhati, M., Hodis, F., & Faircloth, S. C. (2014). "It means everything doesn't it?" Interpretations of Māori students achieving and enjoying educational success "as Māori". *set: Research Information for Teachers*, 2, 33–40.
- Averill, R., Hynds, A., Hindle, R., & Meyer, L. (2015). "Every teacher has to come on board for our Māori students": He wero mō ngā kaiarahi wāhanga ako—The challenge for curriculum leaders. *set: Research Information for Teachers*, 3, 3–11. <https://doi.org/10.18296/set.0021>
- Bakker, J., & Denessen, E. (2007). The concept of parent involvement: Some theoretical and empirical considerations. *International Journal about Parents in Education*, 1, 188–199.
- Bernie, J., & Lall, M. (2008). *Building bridges between home and school mathematics: A review of the Ocean Mathematics Project*. London: University of London, Institute of Education.
- Biddulph, F., Biddulph, J., & Biddulph, C. (2003). *The complexity of community and family influences on children's achievement in New Zealand: Best evidence synthesis iteration*. Wellington: Ministry of Education. Retrieved from <https://www.educationcounts.govt.nz/publications/series/2515/5947>
- Bryan, T., Burstein, K., & Bryan, J. (2001). Students with learning disabilities: Homework problems and promising practices. *Educational Psychologist*, 36(3), 167–180. https://doi.org/10.1207/S15326985EP3603_3
- Bull, A. (2009). *From community engagement in education to public engagement with education* (Working paper). Retrieved from <http://www.nzcer.org.nz/research/publications/community-engagement-education-public-engagement-education>
- Bull, A., Brooking, K., & Campbell, R. (2008). *Successful home-school partnerships*. Wellington: Ministry of Education.
- Civil, M. (2006). Working towards equity in mathematics education: A focus on learners, teachers, and parents. In S. Alatorre, J. L. Cortina, M. Sáiz, & A. Méndez (Eds.), *Proceedings of the Twenty Eighth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. 1, pp. 30–50). Mérida, Mexico: Universidad Pedagógica Nacional.
- Crozier, G., & Davies, J. (2007). Hard to reach parents or hard to reach schools? A discussion of home–school relations, with particular reference to Bangladeshi and Pakistani parents. *British Educational Research Journal*, 33(3), 295–313. <https://doi.org/10.1080/01411920701243578>
- Desforges, C., & Abouhaara, A. (2003). *The impact of parental involvement, parental support and family education on pupil achievement and adjustment: A literature review* (Research Report Number 433). London: Department of Education and Skills.

- Education Review Office. (n.d.). *Education review office website*. Retrieved from <http://www.ero.govt.nz/>
- Education Review Office. (2008). *Partners in learning: Schools' engagement with parents, whānau and communities*. Wellington: Author.
- Education Review Office. (2015a). *Educationally powerful connections with parents and whānau*. Wellington: Author.
- Education Review Office. (2015b). *Accelerating student achievement*. Wellington: Author.
- Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan*, 76(9), 701–712. <https://doi.org/10.1177/003172171009200326>
- Epstein, J. L. (2001). *School, family and community partnerships: Preparing educators and improving schools*. Boulder, CO: Westview Press.
- Epstein, J. L. (2011). *School, family and community partnerships: Preparing educators and improving schools* (2nd ed.). Boulder, CO: Westview Press.
- Eyers, G., & Young-Loveridge, J. (2005). Home school partnerships in mathematics education. *set: Research Information for Teachers*, 1, 43–47.
- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, 13(1), 1–22. <https://doi.org/10.1023/A:1009048817385>
- Fisher, J., & Neill, A. (2007). Exploratory study of home–school partnership: Numeracy. In *Findings from the New Zealand numeracy development projects 2006* (pp. 139–153). Wellington: Ministry of Education.
- Fisher, J., & Neill, A. (2008). Evaluation of home–school partnership: Numeracy. In *Findings from the New Zealand numeracy development projects 2007* (pp. 157–174). Wellington: Ministry of Education.
- Gal, I., & Stoudt, A. (1995). *Family achievement in mathematics: NCAL Connections*. Philadelphia: National Center on Adult Literacy, University of Pennsylvania.
- Gilmore, A., & Smith, J. K. (2011). *NEMP writing, reading and mathematics report 2010*. Dunedin: Education Assessment Research Unit. Retrieved from <http://nemp.otago.ac.nz/report/2010/NEMP%20Report%202010.pdf>
- Goodall, J., & Montgomery, C. (2014). Parental involvement to parental engagement: A continuum. *Educational Review*, 66(4), 399–410. <https://doi.org/10.1080/00131911.2013.781576>
- Harris, A., & Goodall, J. (2008). Do parents know they matter? Engaging all parents in learning. *Educational Research*, 50(3), 277–289. <https://doi.org/10.1080/00131880802309424>
- Hindle, R., Hynds, A., Averill, R., Meyer, L., & Faircloth, S. (2016). An ontological perspective on the development of home–school partnership relationships with Indigenous communities, *The Australian Journal of Indigenous Education*. <https://doi.org/10.1017/jie.2016.16>

Enhancing parental involvement in student learning

- Hornby, G., & Lafaele, R. (2011). Barriers to parental involvement in education: An explanatory model. *Educational Review*, 63(1), 37–52. <https://doi.org/10.1080/00131911.2010.488049>
- Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, 67(1), 3–42. <https://doi.org/10.3102/00346543067001003>
- Hynds, A., Averill, R., Hindle, R., & Meyer, L. (2016). School expectation and student aspirations: The influence of schools and teachers on indigenous secondary students. *Ethnicities*. <https://doi.org/10.1177/1468796816666590>
- Hynds, A., Meyer, L., Penetito, W., Averill, R., Taiwhati, M., & Hodis, F., with Faircloth, S. (2013). *Evaluation of He Kākano professional development for leaders in secondary schools: Final report*. Wellington: Ministry of Education. Retrieved from: <http://www.educationcounts.govt.nz/publications/91416/english-medium-education/144630>
- LaRocque, M., Kleiman, I., & Darling, S. M. (2011). Parental involvement: The missing link in school achievement. *Preventing School Failure: Alternative Education For Youth*, 55(3), 115–122. <https://doi.org/10.1080/10459880903472876>
- McNaughton, S. (2016). Empowering parents to support their child's learning of mathematics: Investigating the effects of an academically focused home–school partnership. (Unpublished masters thesis). University of Auckland.
- Ministry of Education. (n.d.-a). *Families*. Retrieved from <http://nzmaths.co.nz/families>
- Ministry of Education. (n.d.-b). *Home–school partnership: Numeracy*. Retrieved from <http://nzmaths.co.nz/node/1373>
- Ministry of Education. (n.d.-c). *Home–school partnership: Numeracy activities*. Retrieved from <https://nzmaths.co.nz/home-school-partnership-numeracy-activities>
- Ministry of Education. (2007). *The New Zealand curriculum*. Wellington: Author. Retrieved from <http://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum>
- Ministry of Education. (2008a). *The number framework*. Wellington: Author. Available at <http://nzmaths.co.nz/sites/default/files/images/NumBook1.pdf>
- Ministry of Education. (2008b). *Ka hikitia—Managing for success: Māori education strategy 2008–2012*. Wellington: Author. Retrieved from <http://www.minedu.govt.nz/theMinistry/PolicyAndStrategy/KaHikitia.aspx>
- Ministry of Education. (2011a). *Tātaiako: Cultural competencies for teachers of Māori learners*. Wellington: Author. Retrieved from <http://www.teacherscouncil.govt.nz/required/tataiako.stm>
- Ministry of Education. (2011b). *Ministry of Education position paper: Assessment*. Wellington: Author.
- Ministry of Education. (2012). *Statement of intent 2012–2017*. Wellington: Author. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/2012SOI/2012StatementOfIntent.pdf>

- Ministry of Education. (2013a). *Pasifika education plan 2013–2017*. Wellington: Learning Media. Retrieved from <http://www.minedu.govt.nz/NZEducation/EducationPolicies/~media/MinEdu/Files/EducationSectors/PasifikaEducation/PasifikaEdPlan2013To2017V2.pdf>
- Ministry of Education. (2013b). *The national administration guidelines (NAGs)*. Wellington: Author. Retrieved from <http://www.minedu.govt.nz/theMinistry/EducationInNewZealand/EducationLegislation/TheNationalAdministrationGuidelinesNAGs.aspx>
- Ministry of Education. (2014a). *Annual report 2014*. Wellington, New Zealand: Author. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/AnnualReport/MOEAnnualReport2014-Web.pdf>
- Ministry of Education. (2014b). *Ministry of Education statement of intent 2014–2018*. Wellington: Author.
- Ministry of Education. (2015a). *Education counts homepage*. Retrieved from <http://www.educationcounts.govt.nz/home>
- Ministry of Education. (2015b). *The national education guidelines (NEGs)*. Wellington: Author. Retrieved from <http://www.minedu.govt.nz/theMinistry/EducationInNewZealand/EducationLegislation/TheNationalEducationGuidelinesNEGs.aspx>
- Muir, T. (2012). Numeracy at home: Involving parents in mathematics education. *International Journal for Mathematics Teaching and Learning*, 13. Retrieved from <http://www.cimt.plymouth.ac.uk/journal/muir.pdf>
- Mutch, C., & Collins, S. (2012). Partners in learning: Schools' engagement with parents, families, and communities in New Zealand. *School Community Journal*, 22(1), 167–188.
- New Zealand Council for Educational Research. (2015). *New Zealand Council for Educational research Homepage*. Retrieved from <http://www.nzcer.org.nz/>
- Parkinson, A., Doyle, J., Cowie, B., Otrrel-Cass, K., & Glynn, T. (2011). Engaging whānau with children's science learning: Home learning books. *set: Research Information for Teachers*, 1, 3–9.
- Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research*, 77(3), 373–410. <https://doi.org/10.3102/003465430305567>
- Reay, D. (1998). *Class work: Mothers' involvement in their children's primary schooling*. London: UCL Press.
- Robinson, V., Hohepa, M., & Lloyd, C. (2009). *School leadership and student outcomes: Identifying what works and why: Best evidence synthesis iteration..* Wellington: Ministry of Education. Retrieved from http://www.educationcounts.govt.nz/__data/assets/pdf_file/0015/60180/BES-Leadership-Web-updated-foreword-2015.pdf

Enhancing parental involvement in student learning

- Rodriguez, A. J., Collins-Parks, T., & Garza, J. (2013). Interpreting research on parent involvement and connecting it to the science classroom. *Theory Into Practice*, 52(1), 51–58. <https://doi.org/10.1080/07351690.2013.743775>
- Sheldon, S. B., & Epstein, J. L. (2005). Involvement counts: Family and community partnerships and mathematics achievement. *The Journal of Education Research*, 98(4), 196–207. doi:10.3200/JOER.98.4.
- Stenmark, J. K., Cossey, R., & Thompson, V. H. (1986). *Family math*. Berkeley, CA: Lawrence Hall of Science, University of California.
- Tuuta, M., Bradnam, L., Hynds, A., Higgins, J., & Broughton, R. (2004). *Evaluation of the Te Kauhua Māori mainstream pilot project*. Wellington: Ministry of Education.
- University of Waikato & Te Whare Wānanga o Awanuiārangi. (2010). *He Kākano: Te awe o ngā toroa: A school based programme for the development of culturally responsive leaders*. Hamilton: Authors. Retrieved from: <http://heKākano.tki.org.nz/>
- Van Voorhis, F. L. (2003). Interactive homework in middle school: Effects on family involvement and science achievement. *The Journal of Education Research*, 96(6), 323–338. <https://doi.org/10.1080/00220670309596616>
- Van Voorhis, F. L. (2011). Adding families to the homework equation: A longitudinal study of mathematics achievement. *Education and Urban Society*, 43(3), 313–338. <https://doi.org/10.1177/0013124510380236>

Authors

Robin Averill is Associate Dean (Teacher Education) and associate professor of mathematics education at Victoria University of Wellington. Robin's research interests include culturally responsive education, ways to promote equity of access to mathematics achievement, and innovative teacher education techniques.

Email: robin.averill@vuw.ac.nz

Abby Metson is a student in education and psychology at Victoria University of Wellington. Abby has an interest in maths and science education, and was a recipient of a Victoria Summer Research Scholarship, funded by the university and the Mathematics and Science Education Centre Fund.

Email: metsonabby@myvuw.ac.nz

Susan Bailey has recently completed her master's of education at Victoria University, following her BA in social policy and education. Also a recipient of a Victoria Summer Research Scholarship, Susan's life experiences and involvement with Playcentre encourages her to continue her passion for empowering parents to be involved with their children's education.

Email: s.r.bailey@clear.net.nz