



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

*School of Education*

Te Kura Toi Tangata

**Waikato Journal of Education**

Te Hautaka Mātauranga o Waikato



Volume 21, Issue 2, 2016

## Waikato Journal of Education Te Hautaka Mātauranga o Waikato

General Editors: Noeline Wright

Editorial Board: Judy Bailey, Bronwen Cowie, Dianne Forbes, Carol Hamilton, Sharyn Heaton, Richard Hill, lisahunter, Margie Hōhepa, Sally Peters, Clive Pope, Sashi Sharma, Noeline Wright.

International Board Members: Tony Brown (England), Alec Couros (Canada), Agnes Hulme (England), Cathy Reischl (USA), Iram Siraj (England), Christine Sleeter (USA), John Smyth (Australia), Janet Soler (England).

The *Waikato Journal of Education* is a peer refereed journal, published twice a year. This journal takes an eclectic approach to the broad field of education. It embraces creative, qualitative and quantitative methods and topics. The editorial board is currently exploring options for online publication formats to further increase authorial options.

The Wilf Malcolm Institute of Educational Research (WMIER), which is part of the Faculty of Education, The University of Waikato, publishes the journal.

There are two major submission deadline dates: December 1 (for publication the following year in May); June 1 (for publication in the same year in November). Please submit your article or abstract on the website <http://wje.org.nz/index.php/WJE>.

Submissions for special sections of the journal are usually by invitation. Offers for topics for these special sections, along with offers to edit special sections are also welcome.

Contact details: The Administrator Wilf Malcolm Institute of Educational Research, Faculty of Education, The University of Waikato, Private Bag 3105, Hamilton, 3240, New Zealand. Email: [wmier@waikato.ac.nz](mailto:wmier@waikato.ac.nz)

Copyright:



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Publisher: Faculty of Education, The University of Waikato  
Cover design: Donn Ratana  
ISSN: 2382-0373

# Waikato Journal of Education

## Te Hautaka Mātauranga o Waikato

Volume 21, Issue 2, 2016

Introduction <i>Noeline Wright</i>	4
‘Dirty laundry’ in māori education history? Another spin for <i>washday at the pā</i> <i>Georgina Stewart and Hēmi Dale</i>	5
Teachers’ perceptions of the impact of a one-year in-service teacher education programme in the Solomon Islands <i>Richard Edwards, Anthony Fisher and Cecil Reggie</i>	17
Solving word problems in mathematics: An exploratory study among Fijian primary school teachers <i>Hem Dayal and Subhas Chandra</i>	29
Language challenges in mathematics education: A literature review <i>Laura Jourdain and Sashi Sharma</i>	43
Changes to teachers’ practice when using mobile technology with one-to-one classes <i>Lucie Lindsay, Kerry Lee and John Hope</i>	57



## Teachers' perceptions of the impact of a one-year in-service teacher education programme in the Solomon Islands

**Richard Edwards, Anthony Fisher**

Te Kura Toi Tangata Faculty of Education  
University of Waikato  
New Zealand

**and Cecil Reggie**

School of Education  
Solomon Islands National University  
Solomon Islands

### Abstract

*The recent development of a one-year campus-based teacher education programme in the Solomon Islands was intended as a step towards improving access to teacher development opportunities for local teachers wanting to upgrade their skills and qualifications. A group of ten teachers from the second cohort of this programme was interviewed individually to explore their perceptions of the impact that their involvement in the programme had on their teaching and on their lives as teachers. A thematic analysis indicated that the teachers perceived some important benefits in the areas of classroom practice, school leadership and management, and teacher professional skills. It also identified a number of challenges that the teachers felt made it difficult to implement what they had learnt, including a lack of resources, the nature of the local classroom, and the responses of their colleagues. In highlighting specific issues in this context, this research contributes to the sparse literature on teacher development in the Solomon Islands and in the wider Pacific.*

### Keywords

Teacher development; classroom practice; school leadership; Solomon Islands; Pacific

### Introduction

Pacific countries are vibrant and inviting places yet they face significant challenges in sustaining improvement in the education of their young people through effective teacher development. The on-going professional development of teachers has been shown to be vital to the success of students (Timperley, Wilson, Barrar, & Fung, 2007). Professional development enables teachers to continue to reflect on and improve their teaching, become aware of and implement changes in policy and approach, and become familiar with new resources and initiatives. Research into factors affecting the effectiveness of teacher development has identified significant influences that appear to act in most contexts. However, there is limited research to indicate the extent to which they apply in Pacific Island



contexts. The research reported in this paper investigated the perceived impact on a small group of Solomon Islands teachers of a substantial one-year centralised full time in-service teacher education programme. It explores what they saw as the important outcomes of the programme and the challenges they faced in implementing them when they returned to their schools.

The paper adds to the rather sparse literature on teacher education and teacher development in the Pacific and in the Solomon Islands in particular. While it offers insights that can inform future provision of and support for teacher development in the Solomon Islands, it should also have relevance to teacher development in similar contexts elsewhere. The qualitative methodology adopted allowed a rich description of teacher experiences. The analysis used a framework derived from an extensive literature review of teacher development (Timperley et al., 2007) to help make sense of the themes that emerged from the data. The study focused on the way teachers perceived their experiences in implementing new learning upon returning to their local school.

In particular, the research aimed to answer the following questions:

- What did the teachers think they gained from the teacher development programme?
- How did this relate to their existing understandings about teaching and learning?
- How do they think their teaching has changed as a result of their experiences in the programme?
- What did they find challenging or helpful when implementing what they learnt?

## Context

The Solomon Islands lie 1900 km northeast of Australia and comprise six main islands and numerous smaller ones. The population of just over 570 000 (World Bank, 2016) is mainly Melanesian. The rugged geography and scattered nature of the islands, together with a struggling economy, mean that the country faces significant challenges in developing and maintaining infrastructure, communication, education, and health. The main form of transport is by sea and many towns and villages are isolated.

The Ministry of Education administers the education system in the Solomon Islands centrally but there is considerable decentralisation to the ten provincial authorities (Malasa, 2007). Schooling is free for children in early childhood, primary, and secondary sectors but has only recently been made compulsory and not all students attend school, particularly at secondary level. The internal turmoil from 1998–2003 had a serious impact on education, which is still recovering. Schools are relatively under-resourced, not well-maintained and hard to staff, with significant numbers of untrained teachers (Ministry of Education and Human Resources, 2007). The curriculum has recently been revised and substantial aid funding is being directed at improving infrastructure and providing supporting resources for teachers.

Initial teacher education in the Solomon Islands is provided primarily through the School of Education, which is now a school within the Solomon Islands National University formed in 2012. Teachers can graduate with a certificate, diploma, or more recently, a degree. Some teachers are also trained overseas at institutions around the Pacific. There are limited opportunities for teachers in schools to receive any professional development. Where these opportunities exist, they usually involve travel to Honiara, the capital city. The type of professional development offered is commonly associated with specific curriculum or resource initiatives and is not related to on-going development of teaching skills and understanding. This is particularly problematic for practising teachers in isolated schools whose only experience of teaching is that of their own education and often with teachers who themselves had limited training. It is not uncommon for senior students to be given teaching roles in more isolated schools.

As a result of recognising the high proportion of untrained teachers, the Solomon Islands School of Education, in partnership with the University of Waikato (New Zealand), developed a one-year campus-based programme aimed at providing an introduction to student learning, effective pedagogy, and basic curriculum knowledge for untrained teachers. This programme has been successfully implemented since 2011. More recently, a parallel programme has been developed to extend the one-year certificate obtained by these teachers to a diploma by offering a full-year, campus-based

programme. The diploma aims to further develop their understanding of effective teaching and learning and to provide a way of upgrading their qualification. This programme forms the context of the study reported here.

## Literature Review

School leaders and teachers around the world are constantly presented with the challenges of new curricula, assessment approaches, technology and a changing student population. The associated demand for continual upgrading and development of teachers' skills and knowledge is targeted at improving student outcomes (Ha, Lee, Chan, & Sum, 2004) reflecting the growing body of research evidence that links high quality professional development, teachers performance and student outcomes (Darling-Hammond, 1999; Timperley et al., 2007).

Professional learning can be described as the development of a person in their professional role and is wider in scope than just career development (Glattenhorn, 1987). The related concept of professional development is less critically reflective and more performative in approach (O'Brien & Jones, 2014). Professional development aims to support the acquisition of new skills and familiarity with new developments and changes within their educational context (Ramatlapana, 2009). Traditional approaches to professional development typically involve teachers attending workshops on the latest educational material and/or innovation. Participants listen passively to outside experts and are encouraged to apply the strategies in their own classrooms/schools. However few, if any, follow up activities are offered and teachers rarely apply their new knowledge or skills when they return to their schools (Joyce & Showers, 2002).

Professional development research has traditionally been carried out in developed countries. These studies have provided a depth of knowledge in regards to process and outcomes of professional development. However, this research often lacks the contextual specificity or the relevance to be applied to developing countries and presents a very western view of professional development (Bush, 2008; Moorosi & Bush, 2011). Despite this need for research to consider the contextual issues faced by developing countries, there is limited research that has explored these aspects in any great depth in the countries of the South Pacific (Rouikera, 2013). Often the provision of professional development within regions like the South Pacific is limited due to factors such as economy, social, health and educational problems (Bush, 2008). This also raises issues of equity and access which are particular evident within the Solomon Islands due to the geographical spread. Despite the relevance of these contextual factors, there is an argument that the continued globalisation of educational thinking supports the transference of models of practice across countries regardless of context (Gunter, 2008).

Finding ways to ensure that professional development has the desired outcome in terms of teachers acquiring new skills and knowledge that are then incorporated into their practice has therefore been a focus of attention in the literature. Timperley et al. (2007) in a review of teacher professional learning identified seven features of effective professional development that impact on student outcomes. The seven features are: extended time for opportunities to learn; engaging external expertise; engagement of teachers in the learning process; challenging prevailing discourse; opportunity to interact with a community of learners; content that is consistent with wider trends and policy; and active school leadership. These features highlight that professional development does not occur in isolation (Ball & Tyson, 2011). Often, factors that are beyond the control of the providers of professional development determine the success or otherwise of such programmes. Timperley et al. (2007) identified two such factors as the "wider social context" and the "professional learning context". The wider social context refers to such aspects as the location of the training institute, teaching staff, cultural and traditional practices, gender issues, required funding and the resources available to implement professional development programmes (Lingam, 2010). The professional learning context refers to such aspects as the timing of the programmes, content and activities for learning and involvement of external experts (Timperley et al., 2007).

A central assumption about the wider social context is that it contributes to the existing knowledge, values and beliefs that teachers hold and which influence their practice (Bosamata, 2011; Rodie, 2011). Embedded here is the influence that the local context can have on the impact of professional development. Programmes that make connections with and receive support from the wider social

context can be designed to address specific teacher needs and ensure that the content is more meaningful to that context. This wider support enables teachers to adapt to change and improve their practice more readily (Ramatlapana, 2009), which in turn has a positive impact on student outcomes.

Research on the context of professional learning has identified the importance of providing sufficient time for teachers to learn and master new knowledge and skills. Providing sufficient time makes it more likely that teachers will incorporate the new information into their existing values and beliefs and that it is more likely to become part of their everyday practice (Borg, 2011; Symeonidou & Phtiaka, 2009; Timperley et al., 2007). In developing professional development programmes within specific contexts, particularly those of developing countries, it is important to have knowledge and understanding of the educational context and the changes occurring within that context (Ramatlapana, 2009). Such programmes should therefore not only present new knowledge and skills to challenge teachers' development but also take into account the teachers' indigenous knowledge and existing practices, values and beliefs (Sanga, 1996).

As a developing nation, the Solomon Islands face many difficulties in establishing on-going professional development opportunities for its teachers. These difficulties are not only due to the geographical nature of the Solomon Islands but also the financial and cultural factors that impact on the introduction of new approaches in a developing country. Further to this has been the government's emphasis on pre-service training to ensure there are sufficient teachers to meet the increasing demand for education, as only approximately 60 percent of school age children have access to primary education. This emphasis has led to few opportunities being provided for teachers to participate in in-service professional development (Maelagi, 2011).

Teachers within the Solomon Islands find it difficult to continue their own learning and gain higher qualifications beyond the certificate obtained from their initial training. Research by Burnett and Lingam (2007) and Hynds and McDonald (2010) has shown that the achievement of higher qualifications has a twofold effect, first as an incentive to improve practice and second to update teachers' pedagogical knowledge and skills. Not being able to access such opportunities has a negative impact on teachers' practice and student learning (Gibson & Brooks, 2012). This creates a view of the profession as being a "dead end" (Lingam, 2010), which is reflective of the situation within the Solomon Islands.

To address some of the barriers to improving teaching and learning, a new Diploma in Primary Teaching In-service (DPTI) was developed through a partnership formed between the Solomon Islands College of Higher Education and the Faculty of Education, University of Waikato (Maelagi, 2011; Rodie, 2011). This course included aspects of the seven effective features of contexts for promoting professional learning identified by Timperley et al. (2007). This was a one-year full time course designed to provide the participants with an extended period of study focusing on new knowledge and skills to improve their teaching practice. This programme would be linked to the educational context of the Solomon Islands and also expose the teachers to aspects of educational leadership, management and administration, which would place those who completed the course in a positive position for future leadership roles within the Solomon Islands. Thus by taking into account those features identified by Timperley et al. (2007), it would increase the impact of the professional learning both positively and substantively on a range of student outcomes as well. However, due to constraints within this specific context not all seven features could be employed. For example, though external experts were involved in the design of the programme they were not involved in the delivery. As this was a significant intervention for the Solomon Islands and because of the lack of research within the Solomon Islands context of teacher professional development, this presented an opportunity to explore the perceptions of teachers on the impact of the course on their practice and knowledge.

## **Methodology**

This research was qualitative in nature and took an interpretivist stance in analysing participant responses. This means the authors made every effort to allow the voice of the participants to show through but acknowledge that in selecting material and commenting, their own views, perceptions, experiences and biases necessarily intrude.

Participants were selected from graduates of a single year cohort involved in the one year *Diploma in Primary Teaching In-service* programme. Because of logistical constraints, participants were all based in Honiara and, while not a consideration for selection, came from a diverse range of socio-economic backgrounds and island communities. Participation was by invitation and informed consent. Ministry of Education approval was sought and gained. Ten experienced teachers, five male and five female, from a range of schools agreed to take part. Every effort was made to protect the identity of participants and to preserve the integrity of their views.

Data collection was undertaken using semi-structured interviews based on the four research questions. Interviews were conducted in Solomon Islands *pidgin*, as this was the first language of all of the participants and of the researcher. The semi-structured nature of the interviews allowed the interviewer to maintain focus on the research questions while allowing participants to more freely express their opinions and what they felt were the most pertinent of their experiences. Interviews were recorded using a digital audio recorder and then transcribed in *pidgin* before translation into English. Participants checked the transcripts for accuracy. The data was then coded using a thematic approach to explore patterns in participants' responses and allow their voice to be more evident in the analysis. The conceptual framework derived from the literature (Timperley et al., 2007) also guided the analysis and interpretation of results.

## Findings

The teachers' responses are presented using the focus areas of the research questions, which include what the teachers thought they gained from their involvement in the programme, how they thought their teaching had changed, and the challenges they experienced in implementing what they had learnt.

### Knowledge and skills gained

All teachers recalled a number of specific aspects of programme content and reported that what they gained was 'very important' because it improved their classroom practices and teaching strategies. Three specific areas of learning commented on were new teaching approaches, administration and management, and professional skills.

The emphasis on learner-centred approaches was seen as novel and worthwhile. All participants commented on this in contrast with the approaches they had been using previously and said they had helped them to improve their teaching and understand their students better.

The first thing that I see as a new knowledge to me from the diploma training is the learner-centred approach. A lot of learning in the class should be done by children while the teacher should only facilitate and provide guidance. Teachers should make some changes from the traditional teacher-centred approach where teachers often instruct and tell children what to do or learn. (T1)

Associated with this emphasis on the learner was a focus on outcome-based education reflecting its recent incorporation in the Solomon Islands national curriculum. In their response, T2 said that:

Outcome based education (OBE) approach is a new approach I acquired during the training which is more related to the use of formative assessment and learner-centred approach. The whole learning is focused more on children's learning outcome.

Formative assessment was identified as a new skill. All participants indicated that in the past their classroom assessment involved giving their children a test or exam. They thought that formative assessment helped them to know their children better in terms of their learning.

All along during my teaching career, I knew only the summative assessment where I give children some form of exams and test. Now, I came to realise during the diploma programme that formative is another form of assessment which is an ongoing assessment of children's work. It really helps teachers planning so that appropriate activities are developed to meet the learning needs of children. (T3)



The importance of identifying children who have “special learning needs” was also highlighted by all of the teachers but they felt they needed more knowledge and skills to identify and address those needs. Often children with learning needs would be ignored.

Besides what they learnt in support of their teaching, all of the teachers claimed that they gained new knowledge and skills in school administration and management. They said this not only benefited head teachers (three out of the ten participants held leadership positions) but it also helped prepare classroom teachers to take up leadership positions in the future. One important skill participants thought they gained was school budgeting including the discipline of sticking to a budget.

This course is very timely because most head teachers in our schools have very little knowledge about how to draw up proper school budgeting. This is important so that school grants are spent within the approved budget. (T5)

All teachers also spoke about now understanding teacher appraisal better and how to empower women to take up leadership positions in schools. In the Solomon Islands, the majority of leadership positions in schools are filled by men. The five female participants commented that the new leadership and management skills they acquired from the in-service training helped prepare them to take up leadership roles.

Participants all thought they developed a range of professional skills needed to successfully complete the DPTI programme including working with new digital technologies and research skills. Eight out of ten described how they had improved their academic writing. While this was directly related to success in the programme, participants also saw benefits for their teaching and reporting. This resulted in an associated increase in confidence.

### Perceived impact on practice

Every participant identified specific changes and improvements in their teaching practice and the way they carry out their professional roles in schools. In addition, all participants indicated that they felt that children’s learning had also improved when they applied the new knowledge and skills to their classroom teaching although they did not provide specific evidence in support of this. Most spoke of a definite increase in confidence and in the pride they took in their teaching.

All participants identified using teaching strategies that involved their students more directly in group work and dialogue. By introducing formative assessment, seven participants said that they know their students better than before. They noticed that they are now able to more easily identify and monitor children’s progress in learning. In their responses, it is evident that by knowing student’s strengths and weaknesses in learning, teachers are better able to develop activities to improve children’s learning.

The other change I can see in my teaching is the approach I used to teach my lessons. I am now started to involve children more with group work and hands-on activities compared to my old style of coaching and telling children what to do all the time. Now children can discuss and find answers for themselves and I tend to see children learn better with deeper understanding. (T2)

Several teachers also identified changes to the way they organised their classroom environment to make it more attractive and conducive to learning. For example, one teacher (who is also a principal) said:

After I completed the in-service training, I began to see some changes with how I manage my classroom over the last six months. A lot of improvement has been made in my teaching approach but most importantly, I was so impressed with the way I organised my classroom. For example, lots of learning posters and pictures were displayed on the walls and children’s class activities were hanging on the ceiling.

### *Leadership roles in schools*

Although only three of the participants in this study held head teacher or deputy head teacher positions in their schools, the new knowledge and skills they acquired had an impact on their professional roles and responsibilities in the school, particularly with respect to planning and budgeting.

Now I see all the planning of school programme and academic activities are aligned with the national goals of education in Solomon Islands. Prior to attending the DPTI, all the programme in my school are done on ad hoc basis which does not have proper planning and management. (T5)

I was promoted to become the head teacher of a Level 8 school. It was a new position I was offered after spending more than 20 years of teaching as a class teacher and senior teacher. The new knowledge and skills have helped me a lot in carrying out my roles and responsibilities as a school leader. In addition, I am now able to develop school budgeting and proposals myself that will improve the school programmes and activities. (T10)

Several participants not in leadership roles found that they were now able to see ways to improve leadership at their school and were now able to help school leaders with decision-making.

After completing my diploma programme last year, I am now able to see a lot of weaknesses and failures from school leaders especially on how to manage and administer the school. Now if I see something that is not straight in the school, I have the courage to consult responsible people to make some changes and improvements are made to address the situation.

### *Attitude and behaviour*

Six participants noted that their attitude and behaviour towards children had become friendlier and more caring. They commented on the effect this had on improving students' enjoyment of learning and on reducing poor rates of attendance. Four participants reported more positive attitudes towards the teaching profession generally as demonstrated in their greater courage to teach at higher levels, willingness to act as an agent of change in their school, and a desire to act as a role model to support other teachers in their own development. In situations where participants could work together after completing the programme, they found the mutual support very helpful particularly in implementing new skills and practices in their classroom, and said that this was significantly different from the way they had worked as members of staff previously.

### *Challenges teachers experienced in schools*

The participants felt there were a number of challenges that influenced their ability to effect change, despite feeling positive about the wealth of knowledge and skills they perceived they had gained from the DPTI programme. The three main challenges encountered were the traditional classroom situation or context, the teaching resources available at the school, and resistance to change from teacher colleagues, school authorities and leaders. Some of the challenges were beyond their control, especially when the power to make decisions rests with school leaders, leading to feelings of frustration and disempowerment.

#### *Classroom situation or context*

The traditional classroom context in all of the participants' schools tended to mitigate against the implementation of the skills and practices participants had developed in the diploma programme. A common challenge faced by these teachers was class size with most classes having between 40 and 50 children and not enough space, desks, or resources, including textbooks. Classroom management and noise were identified as associated issues as was the range of abilities of students.

The size of classroom I am using in my school is very small and could not cater for 47 children in my class. Therefore, what I normally do during class lessons is, take the children outside under the trees for group work activities. However, this is not always possible, as I cannot take the children out when it is raining. (T5)

The diversity of cultural backgrounds and traditional practices was also identified as an issue. Two participants in particular emphasised that it is important for teachers to understand and respect children's cultural values and beliefs

For example, there are different ethnic or island groups we have in the Solomon Islands that form the school community. If I make any decision in the class that affects any cultural or ethnic group, there will be conflict which may cause some disturbances at the school. (T6)

### *Teaching resources and materials*

A lack of teaching resources and materials at their schools was identified by all ten participants as making it difficult to implement effectively the new knowledge and skills they acquired from their training. They blamed this on insufficient funding from the national government and noted that teachers sometimes used their own money to buy the materials to use in teaching. This was compounded by the need for time and materials to develop new resources to support the new practices that the teachers sought to implement.

Lack of enough textbooks and other teaching materials in the school is an ongoing challenge faced by teachers. The annual school grant from national government is not enough to meet the request from each class in the school. This challenge contributes to some of us teachers not making the lessons more effective and interesting for children. As a result, I often have to skip the lesson for the day and do other topics which do not require materials instead. (T9)

In order to apply the new approach such as OBE [*outcomes-based education*] and formative assessment effectively, there are lots of work to be done which needs more time and commitment. For example, I have to prepare the class lesson and its activities, prepare activity for special learning need children and I have to ensure records of individual level of achievement is up to date. (T8)

### *Teacher colleagues*

Five participants reported that some teachers in the schools they were posted to were not supportive of the new approaches and changes they were trying to implement. This seemed to be related to ill feeling about the higher qualification and associated increase in salary gained from the training together with a lack of awareness of the benefits of the changes being adopted.

Some teachers especially the certificate holders often see those of us who completed the diploma in-service programme as higher in qualification and salary so they are not very cooperative and supportive in their decisions and actions. (T9)

I have come across many challenges when I try to educate and influence teachers in my school to adapt to the new knowledge and skills. However, since most teachers are still certificate holders with little knowledge about the new teaching approaches, they are reluctant to make any changes. It seems they are very comfortable with traditional teacher-centred teaching approach. (T10)

However, in one school where a strong working relationship already existed, one participant found her more experienced colleagues very supportive of what she was doing.

### *School authorities and leaders*

The role of school leaders in providing the resources required to effect change was seen as crucial. In several cases participants said that if those in authority did not understand the importance of new knowledge and skills, they were not willing to support teachers with their needs. This varied from a lack of support to open resistance. A lack of relevant teacher development for both leaders and teachers was seen as instrumental in this. This appeared to be compounded by the number of school leaders who had little or no training or experience for leadership positions that they had been appointed to.

### **Discussion**

This example of teachers' responses to an in-service teacher education programme highlights some important factors affecting successful implementation of such a programme. They include the nature of what teachers learn that they find valuable, the effect on teacher confidence and self-efficacy, and the central role of the affordances and constraints imposed by the context.

All of the teacher participants perceived that they had gained new knowledge and skills from completing the programme. The new knowledge related to teaching practice required a change in pedagogical approach away from a traditional transmission model to a more child centred approach. This child centred approach aligned with the new curriculum introduced in the Solomon Islands and provided a coherent conceptual framework within which to make sense of the practical ideas and skills being developed in the programme. Developing their understanding therefore also required the participants to gain a deeper knowledge of the curriculum.

The development of knowledge and skills also provided an opportunity for the teachers to develop specific skills related not only to their pedagogical practice but also to management and administration and to a range of other aspects of their professional practice. The teachers' appreciation of this reflects a paucity of opportunities for professional development and supports provision of broad-based holistic programmes rather than those with a specific and narrow focus (Lingam, 2010). Such an approach is also likely to be more effective in contexts where isolation and lack of resources, both financial and material, are issues.

The clear perception of all of the teachers that their teaching practice had improved, with a resulting impact on learning outcomes of their students, highlighted a clear growth in their confidence and self-efficacy. Improvements in teaching practice were seen by the participants as being due to their increased knowledge of children's learning and the importance of the relational aspect of teaching. This suggests that the teachers were able to look beyond the specific knowledge and skills themselves to see their intended purpose. The results they noticed in terms of a more positive classroom environment and greater student engagement gave them confidence and a sense of agency that enabled them to adopt a more collaborative approach to their work, including the sharing of their newfound knowledge and skills. The benefits of this for improving teaching in schools generally is clear but requires a willingness on the part of other staff that is not always evident (Timperley et al., 2007).

In spite of the positive outcomes, participants in the DPTI programme all acknowledged barriers that inhibited their ability to take full advantage of their new knowledge and skills. Such barriers have been discussed in the literature (Gibson & Brooks, 2012; Ha et al., 2004; Rouikera, 2013) and are commonly experienced, particularly in contexts similar to those in the Solomon Islands. The lack of resources that would enable them to provide the supporting material to engage the children was particularly problematic as it prevented them from implementing a range of strategies that they wanted to trial. This was compounded by not having the time and materials to develop their own to meet the need. Also, the teachers frequently taught very large and diverse classes that put even greater pressure on what limited resources were available.

Some teachers faced a lack of support from their peers and school leaders that appeared to result from a lack of understanding of what the teachers were attempting to implement and an inability to see any reason to change what they had always done. Some also saw that having had the privilege of more training, a higher qualification, and better pay meant that the returning teachers should be expected to

do more of the work. Low teacher pay has been identified as a disincentive to change and to the implementation of improved teaching practice in other studies in the Pacific (Lingham, 2010; Rodie, 2011).

The findings are in many ways not surprising and are consistent with what is already known in relation to professional development. This study has drawn attention to the impact of the seven features of effective contexts for promoting professional learning identified by Timperley et al. (2007). Each of the seven features is reflected in the findings, reinforcing the importance of context in professional development. In some cases, the positive impact was clearly evident, for example in the provision of extended time in the full year programme and the associated opportunity to develop a community of learners. The extended time appeared to result in a more grounded acceptance of the policy shift towards learner-centred approaches and outcome-based education, both of which challenged the participants' existing thinking. The importance of active school leadership was evident in the common perception that a lack of supportive leadership made implementing change difficult.

The significant impact of context specific physical and social factors (Timperley et al., 2007) on teachers' professional learning and the sustainable implementation of what they have learnt was also highlighted. This is consistent with the recommendation made by Symeonidou and Phtiaka (2009) that in-service training not only has to address the needs of the participants but also needs to take into account the educational context. This also highlighted the difficulties of providing teacher development within a geographically wide area with limited transport available.

The results of this study provide insight into the teacher development experience of a group of teachers who undertook a one-year teacher in-service teacher development programme in the Solomon Islands. While suggesting implications for teacher development further afield, there are two limitations that need to be considered. The first concerns the small sample size in terms of teachers and schools and the extent to which the findings can be generalised across the Solomon Islands context. The second is that the findings only indicate participants' perceptions. While valuable, it would be useful to extend this with observations of classroom practice and student outcomes to give a richer understanding of the impact of this particular teacher education programme.

## Conclusion

The research reported here looks at a specific example of a programme aimed at upgrading teaching qualifications for practising teachers. Such a programme acknowledges the limited teacher education of many teachers in the Solomon Islands and the need to provide pathways to better practice and higher salaries for teachers in schools that are often isolated and under-resourced. This situation is also evident in other parts of the Pacific. The reported perceived benefits by the teachers in terms of improved classroom practice, better student outcomes, greater confidence, and more positive and professional attitudes suggest that such programmes are worth pursuing.

However, the effect context has on successful implementation is very clear and very much consistent with what has been found elsewhere (Timperley et al., 2007). Several challenges including resource limitations, isolation, lack of collegial support, and a lack of trained and experienced leaders are already well known. Others such as the effect of cultural and linguistic diversity in the classroom are specific to the Solomon Islands. They suggest that to bring about any lasting change will require significant large-scale investment over an extended period of time.

Of particular interest was the enthusiastic way participants reported on what they had learnt. Their acknowledgement of the value of learning a range of concepts and skills such as budgeting, writing and the use of digital technologies, that went beyond classroom practice highlighted the need for a broad-based approach to in-service teacher education.

There is clearly potential for in-service programmes such as this to contribute significantly to improved educational outcomes for students in Solomon Islands schools. There is however, still a large amount of research needed to underpin this and a need for this research to be published for a wider audience. The importance of context points to the need for local academics to undertake the research and there is considerable potential for investment in partnerships between less experienced and established researchers to facilitate this.

## References

- Ball, A. F., & Tyson, C. A. (2011). *Studying diversity in teacher education*. Lanham, MD: AERA/Rowman & Littlefield.
- Borg, S. (2011). The impact of in-service teacher education on language teachers' beliefs. *System: An International Journal of Educational Technology and Applied Linguistics*, 39(3), 370–380. <http://dx.doi.org.ezproxy.waikato.ac.nz/10.1016/j.system.2011.07.009>
- Bosamata, J. (2011). *Induction experiences of beginning secondary teachers in Solomon Islands* (Masters Thesis, University of Waikato, Hamilton, New Zealand). Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/5377>
- Burnett, G., & Lingam, G. I. (2007). Reflective teachers and teacher educators in the Pacific Region: Conversations with us not about us. *International Review of Education*, 53(3), 303–321. <http://dx.doi.org/10.1007/s11159-007-9046-z>
- Bush, T. (2008). *Leadership and management development in education*. London, England: Sage. <http://dx.doi.org/10.4135/9781446213605>
- Darling-Hammond, L. (1999). Target time toward teachers. *Journal of Staff Development*, 20(2), 31–36.
- Gibson, S., E., & Brooks, C. (2012) Teachers' perspectives on the effectiveness of a locally planned professional development program for implementing new curriculum. *Teacher Development*, 16(1), 1–23. <http://dx.doi.org.ezproxy.waikato.ac.nz/10.1080/13664530.2012.667953>
- Glattenhorn, A., (1987). Cooperative professional development: Peer centred options for teacher growth. *Educational Leadership*, 3(45), 31–35. <http://dx.doi.org/10.1177/074193259001100308>.
- Gunter, H. M. (2008). Policy and work reform in England. *Educational Management Administration & Leadership*, 36(2), 253–270. <http://dx.doi.org.ezproxy.waikato.ac.nz/10.1177/1741143207087776>
- Ha, A., Lee, J., Chan, D., & Sum, R. (2004). Teachers' perceptions of in-service teacher training to support curriculum change in physical education: The Hong Kong experience. *Sport Education and Society*, 9(3), 421–438. <http://dx.doi.org./10.1080/13573320412331302467>
- Hynds, A., & McDonald, L. (2010). Motivating teachers to improve learning for culturally diverse students in New Zealand: Promoting Maori and Pacific Islands student achievement. *Professional Development in Education*, 36(3), 525–540. <http://dx.doi.org/10.1080/19415250903319275>
- Joyce, B., & Showers, B. (2002). *Designing training and peer coaching: Our needs for learning*. London. England: National College for School Leadership. Retrieved from <http://www.ncsl.org.uk/mediastore/image2/randd-engaged-joyce.pdf>.
- Lingam, G. I. (2010). Continuing education via distance learning: The case of primary teachers in the regional countries served by The University of the South Pacific. *International Journal of Continuing Education & Lifelong Learning*, 2(2), 89–99.
- Maelagi, E. E. R. (2011). *Teachers in training: Their transition experiences and their perceptions of preparedness to teach in Solomon Islands schools* (Masters Thesis, University of Waikato, Hamilton, New Zealand). Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/5593>
- Malasa, D. P. (2007). *Effective school leadership: An exploration of issues inhibiting the effectiveness of school leadership in Solomon Islands' secondary schools* (Master's thesis. University of Waikato, Hamilton, New Zealand). Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/2429>
- Ministry of Education and Human Resources. (2007). *Education strategic framework 2007-2015*. Honiara, Solomon Islands: MEHRD.
- Moorosi, P. and Bush, Tony. (2011) School leadership development in Commonwealth countries : learning across the boundaries. *International Studies in Educational Administration*, 39(3), 59–74. Retrieved from <http://wrap.warwick.ac.uk/39460/>
- O'Brien, J., & Jones, K. (2014). Professional learning or professional development? Or continuing professional learning and development? Changing terminology, policy and practice. *Professional Development in Education*, 40(5), 683–687.

- Ramatlapana, K. A. (2009). Provision of in-service training of mathematics and science teachers in Botswana: Teachers' perspectives. *Journal of Mathematics Teacher Education*, 12(2), 153–159. <http://dx.doi.org/10.1007/s10857-009-9101-8>
- Rodie, P. (2011). *The perceptions of beginning secondary teachers about their professional learning experiences in the Solomon Islands Context* (Doctoral Thesis, University of Waikato, Hamilton, New Zealand). Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/5976>
- Rouikera, C. (2013). *The impact of a professional development programme on the effectiveness of school leaders in Solomon Islands*. (Master's thesis, University of Waikato, Hamilton, New Zealand). Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/7927>
- Sanga, K. F. (1996, June). *Negotiating indigenous participation in teacher education programme development*. Paper presented at the Canadian Association for Teacher Education, XXIV Annual Conference, Brock University, St. Catherine, Canada.
- Symeonidou, S., & Phtiaka, H. (2009). Using teachers' prior knowledge, attitudes and beliefs to develop in-service teacher education courses for inclusion. *Teaching and Teacher Education*, 25(4), 543–550. <http://dx.doi.org/10.1016/j.tate.2009.02.001>
- Timperley, H., Wilson, A., Barrar, H., & Fung I. (2007). *Teacher professional learning and development: Best Evidence Synthesis iteration (BES)*. Wellington, New Zealand: Ministry of Education.
- World Bank. (2016). *Data: Population, total*. Retrieved from <http://data.worldbank.org/indicator/SP.POP.TOTL>