

Professional development in Food and Textiles Technology in Samoa: How can we improve learning in the classroom?

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Abstract

In this article, professional development for Food and Textiles Technology teachers in Samoa is discussed with particular reference to teacher learning, teacher reflective practice, and improvement in student learning outcomes. Prior research highlights that teacher professional development links to improvements in teaching. There is a significant relationship between teacher learning and improvement in student learning, which contributes to addressing the problem of poor student outcomes. Effective teacher learning also leads to increased student engagement. Continuing professional education is important for teachers, and the research recommends that principals take a lead in supporting professional development for effective teaching. This study focuses on the analysis of findings from a small-scale study of Food and Textile teachers' experiences of professional learning. The teachers reported that, while they understood the need for further professional learning, insufficient opportunities for professional development were provided by schools and the Ministry of Education, Sports & Culture – and, even where it *was* available, either not enough teachers took the opportunity or the content provided was of limited value. The study aims to add to our research-based knowledge on how to improve and enhance teacher learning in schools in Samoa, in particular, in the area of Food and Textiles Technology.

Introduction

There is a need for the effective implementation of teacher development in secondary schools in Samoa in order to meet the change in teaching and learning styles, and to help improve student learning outcomes. Both the report into professional development for secondary teachers by the Ministry of Education, Sports & Culture (the Ministry) (2004b) and more recent research conducted by Soti and Mutch (2011) reveal that professional development for teachers in secondary schools in Samoa needs improvement. Teacher professional development ought to be transformational, whereby it leads to the promotion of teacher values, beliefs and skills that improve students' learning outcomes. The present study was carried out to ascertain the challenges associated with the effective implementation of professional development for Food and Textile teachers in secondary schools in Samoa. Despite the importance of food technology to the development of both individuals and society at large, this is an area into which there is currently little research.

Background to the study

Enhanced professional development for teachers of Food and Textiles Technology in secondary schools in Samoa will assist in making teaching and learning more effective in this subject area. All Food and Textiles teachers, and their students, can benefit from improving the effectiveness of teachers' practices in the classroom (Timperley, Wilson, Barrar, & Fung, 2007). Improved quality and quantity of professional development will make an important contribution to the knowledge and skill sets of teachers, and so enhance students' own strengths and support them in their weaknesses (Timperley et al., 2007). Teachers also need to collaborate with researchers (Timperley et al., 2007) to ensure that valid conclusions are drawn from research and, in this case, can contribute to teacher in-service programmes conducted by the Ministry.

There are several areas in which this study can offer useful insights. Firstly, research into professional learning provides the Ministry, principals, Food and Technology teachers, and students with detailed information about the actual picture of effective professional development in Samoan schools. It suggests ways to improve the current professional development situation, and in turn, assists with the formulation of future professional development policies which ensure all teachers have access to ongoing learning opportunities.

Secondly, the study also opens opportunities for further research in the area based on the knowledge gaps other scholars will have found. Timperley et al. (2007), focused their report using a constructivist direction in studying the evidence about teacher learning. This concept of constructivism provided a combined account of teacher professional learning so that the teachers can construct their own understanding and knowledge of the world through experiencing things and reflecting on their experiences, (Tasker, 2002). Significantly, the constructivist teacher provides tools such as problem solving and inquiry-based learning activities in which students formulate and test their ideas, draw conclusions and express their knowledge in a collaborative learning environment.

In this study, I set out to explain the state of teacher professional development in Samoa, focusing in particular on the area of Food and Textiles Technology. It is important to enhance professional development opportunities for teachers because as teachers practise in the classroom, they become more aware of the need to improve or change. Burnaford, Fisher, and Hobson (2001, p. 20) stated, "Teaching ... involves reflecting on the nature of human development ... and personal philosophy of education." Effective professional development becomes a journey for teachers in which they apply new knowledge, skills and understanding to their own classroom practices (Kennedy, 1997).

Having trained Food and Textile Technology teachers for over 10 years, as a researcher I found that many teachers experience translating their knowledge and skills about teaching Food and Textiles into effective teaching practice difficult due to a lack of resources. This observation is mirrored in research by Franken and McComish (2003) and Kennedy (1997), who stated that students do not have the power to learn more because of the quality of resources available for use in the teaching and learning process. In this process for Food and Textile Technology, the supply of resources such as consumables, tools and equipment are very important if practical tasks are to be carried out in the classroom. Unfortunately, if there are no resources then the teacher

may not be able to offer the practical component of the Food and Textiles learning. The lack of practical opportunities has serious impact on learning in Food and Textile Technology. Many of the students who opt to take these subjects do not perform well in more traditional academic subjects, and select Food and Textiles because they want to learn more practical skills.

Effective teaching strategies and teacher learning are attributable to factors like frequent professional development and improved classroom practice being acknowledged as priorities. Guskey (2002) noted that it was important to link professional development with classroom learning activities. Furthermore, Guskey (2000) also recommended linking evaluation with the planning of future professional development. This approach is important as most teachers need to see the feedback of whether they had improved or hindered their teaching practice through the professional development.

Ongoing professional development of teachers is important because education is an ever-growing and an ever-changing field (Gay, 2010). This simply means that teachers must be lifelong learners in order to teach students effectively. Ongoing professional development is critical for teachers who wish to improve their practice and interactions with students. McDonald (2010) also indicated that it is important to communicate with educators from other subject areas to improve teacher learning in the classroom. This cross-curricular interaction allows more room to offer the best learning experience for students.

Context of the study

The small-scale study of teacher professional development for Food and Textile Technology teachers reported in this article was conducted in 2017. While working with Food and Textile Technology teachers, I developed a range of authentic tasks to enhance teachers' learning experiences. I believe that many researchers and educators support the constructivist theories of education where learners are taught to question, challenge and critically analyse information on content knowledge and skills (Gay, 2010). I wanted to find out how teachers found these learning experiences, as well as how these learning and other professional learning experiences, translated into classroom practice.

Professional development for Food and Textile Technology teachers is structured and organised by the New Zealand Agency for International Development, the Samoa Secondary Education Curriculum and Resources Project, and the Government of Samoa/ Asian Development Bank Education Sector. Consultants from New Zealand have worked with representatives from the Ministry of Education, Sports and Culture's Curriculum Division to create programmes that are designed to be interactive, rigorous, and intellectually challenging for the students, and professionally prepared and delivered. The overarching aim of this professional development is to enhance Food and Textile Technology teachers' learning in order to improve student learning outcomes. Teachers are expected to evaluate where they have a need for professional development, to acquire subject knowledge, to develop a wider range of classroom techniques and to consistently deliver education at a high standard to which the students of Samoa are entitled (Ministry of Education, Sports and Culture, 2004a).

Literature review

Learning as a teacher does not cease after initial teacher education, and Food and Textile Technology teachers, like all teachers, require ongoing professional development. This is well-attested to in the literature. Teachers are expected to keep learning new techniques, update their curriculum knowledge and reflect on their practice (Day, 2000; Timperley et al., 2007). There is also ample research that shows that teacher professional learning increases teacher quality and improves student outcomes (Avalos, 2011; Darling-Hammond & McLaughlin, 1995; de Vries, Jansen, & van de Grift, 2013; Timperley et al., 2007). As de Vries et al. (2013) stated, “Teachers who themselves are more learning and development oriented thus express more learning and development orientations towards their students” (p. 86). It is accepted that teacher professional development can vary in focus, length and setting but, “... always at the core of such endeavours is the understanding that professional development is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students’ growth (Avalos, 2011, p. 10).

The literature on teacher professional development is vast and a number of researchers have undertaken meta-analyses or syntheses of the literature to highlight the most common or significant factors in the field. For example, Avalos (2011) reviewed the articles on teacher professional development over 10 years of the publication of the journal, *Teaching and Teacher Education*. Over the period 2000–2010, she found that there had been a move away from shorter, off-site, one-size-fits all approaches and in her summary of the articles she reviewed it was revealed that successful teacher professional development was impacted by external factors, such as political and economic conditions. Some overall trends observed in the literature included the following:

- Teachers’ prior beliefs, perceptions of self-efficacy and opportunity to discuss what they are learning influenced successful teacher learning. It is clear that an important part of teacher learning is mediated through dialogues, conversations and interactions centred on materials and situations as supported by LePage, Maier, Robinson, and Cox (2001) in their study, whilst others like Vescio, Ross, and Adams (2008) have emphasised that teacher learning often involves horizontal sharing of ideas and experiences, active participation in projects or becoming aware of problems that need solutions.
- Prolonged interventions were more effective than shorter ones. As noted by Baldwin and Ford (1988), more time for teacher transfer of learning is necessary for the teacher-learner to model and understand the transfer of ideas and skills. In Samoa it is observed that some experienced Food and Textile Technology teachers are willing to assist their less-experienced colleagues in developing an understanding of successful Food and Textile Technology curriculum strategies and how to transfer teacher learning into improved student learning.
- A combination of tools and resources for learning with combined with opportunities for reflection provides the best opportunity for growth. Avalos (2011) made the point that such ideas are important. As noted in the classroom situation in Samoa, limited equipment and resources are available, which

therefore limits the development of knowledge and skills.

- The development of collaborative activities such as peer mentoring, co-learning and professional networks support enhanced learning. As Avalos (2011) noted, the ideas in co-learning place emphasis upon teacher dialogues. However, although classroom teaching continues to be a solitary activity, it is important to move co-learning to observation and feedback which would promote improved classroom practice.

Timperley et al. (2007) also conducted a synthesis of 217 studies related to teacher professional development. These researchers found seven elements of teacher professional development that impacted on student outcomes: providing sufficient time for learning; engaging appropriate external expertise; engaging teachers in learning; challenging prevailing discourses; participating in communities of practice; consistency with wider trends in policy and research; and active school leadership.

Despite the wealth of research on professional development, little research has been reported on the professional development of Food and Textile Technology teachers. Accordingly, this study was designed to investigate what was happening in one localised context, that of teacher professional development in this curriculum area in Samoa. It was noted and confirmed by the Ministry, that principals should organise more school-based training for Food and Textile Technology teachers in schools. Unfortunately, this training is not thoroughly carried out in some schools. Principals also need to ensure that the professional development opportunities are useful and meaningful so that the learning is actually beneficial for the teachers involved.

Methodology

This study was centred upon the exploration of participants' perspectives and insights into the professional development of teachers in Samoa. Essentially, the study used a qualitative approach in which the participants were interviewed using a *talanoa* method. Listening to the teachers' stories of their professional development, teaching strategies and other issues like curriculum and Ministry requirements also contributed important data to this study. I had the opportunity to interview teachers of Year 13 Food and Textiles Technology at the end of a training course, and they were able to choose whether to contribute to this research study. If they agreed, I outlined the purpose and what the results would be used for.

The methodological approach to this study was *talanoa*. *Talanoa* is a word used in several of the native languages in the Pacific to refer to story, act of telling and occasion of conversation (Havea, 2010). *Talanoa* is more than storytelling. Storytelling is not a meaningless activity, and storytellers do not retell stories just for the sake of retelling. The practice of *talanoa* enabled me to get more insightful responses from the teachers regarding the significance of their professional training when they are invited by the Ministry to participate at any Food and Textile Technology professional development. Since conversation works best when it happens face-to-face, I acknowledged the events in *talanoa* as the participants respond and interact with the reality of their emotions. The *talanoa* aimed to capture the personal perspectives and lived experiences of the

teachers, which are strengths of the qualitative paradigm (Mutch, 2013). *Talanoa* was responsive and culturally appropriate for the Samoan context in which this research took place.

Research participants and questions

As this study aimed to investigate the significance of professional development for Food and Textile Technology teachers in Samoa, the participant pool for this research was relatively small. Six Food and Textile Technology teachers working in schools were chosen because they have experienced what is happening out in the schools, as well as how teacher professional development was organised in each of their schools. Three of these teachers were teaching full time in urban schools and the other three were teaching in rural schools. The following questions framed the qualitative discussions that ensued:

1. How could the teacher improve teacher learning?
2. What makes the teacher want to learn?
3. Are there any gaps in the learning achievements of students?
4. What are the teachers' practices to encourage students to learn better?
5. How can the teacher improve significant relationship between teacher learning and improvement in student learning outcomes?

Each interview/*talanoa* lasted approximately 30 minutes. The responses to the interview questions were recorded by hand. If the responses were in Samoan, they were translated. The transcripts were thematically analysed (Mutch, 2013). Key insights are shared below through a discussion of the themes from the analysis.

Findings and discussion

This study revealed that professional development had a central and pivotal role to play in the teaching of Food and Textiles Technology but it was noted that insufficient professional development had occurred; that it was not ongoing; the quality varied; and not all teachers participated in the professional development programmes. Teacher knowledge and skills in curriculum areas are important because, as Hattie (2009) has argued, teachers can make a difference and therefore teachers must be recognised as, and equipped to be, powerful agents of change.

Insufficient opportunities for professional development provided by schools

Not all teachers interviewed had the opportunity to attend the professional development due to the Ministry's choice of timing for these training sessions. When the professional development sessions were conducted during school hours, then the Food and Textile Technology teachers were asked to remain at school to look after their classes. As noted earlier, teachers who taught "core" subjects (such as Science, Maths and English) were given the first opportunity to participate in professional development. Unfortunately, the Food and Textile Technology teachers had few opportunities to participate. This means that the evidence related to the effectiveness of these training days is very thin.

Teacher 3 noted:

In terms of teacher learning schools should conduct more school based training workshops for teachers to challenge and critically analyse information gained from the National training workshops rather than blindly accept what is taught. This school based training is to adapt more relevant teaching strategies to change teaching approaches and to learn new information and new learning.

Lack of opportunities for professional development provided by the Ministry

The Ministry offered professional development for Food and Textile Technology teachers only once or twice a year. Furthermore, when teachers did attend, there was no follow-up evaluation conducted by the Ministry to evaluate the strategies learnt by participating teachers, or the impact they were having in the classroom. The Ministry should confirm that the teachers are being equipped with the new knowledge and skills when they are engaging with ongoing professional development. This would also allow teachers to gain more knowledge on student learning, particularly in their ability to understand students' thinking, an area which can be problematic. As Teacher 3 explained:

I wanted to see that the curriculum officer needed to organise more PD [professional development] at the Ministry to involve all FTT new teachers to be advised and supported on how to adapt to the curriculum, methodology, teaching methods, and instructional materials to connect with the students' values and learning.

Ongoing induction for beginning teachers is also needed to develop the teaching goals, knowledge and strategies that are needed. Unfortunately, this does not always happen in Samoa. Some plans for an ongoing teacher training at school level do not get fully implemented due to lack of support from principals. Teacher 5 raised the issue that:

The same teachers added and pushed the ongoing professional development of FTT teachers and all teachers teaching programmes should be involved in the professional development to increase their pedagogical knowledge and curriculum learning. Teachers also need to teach students to give feedback and to construct their deep thinking to analyse their progress.

Variation in quality

One of the struggles Food and Textile Technology teachers face is attempting to teach a practical subject without the resources necessary to do so. Without resources, the teacher may not be able to cope with the practical tasks to be handled in the classroom. It is equally important to see and describe the conditions that surround teacher professional development, assisting schools to be more selective when focusing their training and development on student learning needs and developing strategies to change classroom teaching practice. Professional development for teachers should emphasise not only

skills and knowledge but allow teachers to explore their own values and beliefs in the development of content and pedagogical experiences to change teacher practice. Teacher 5 stated:

I found it very useful for the teachers to come together to attend PD and share the practical tasks to further improve their practical skills. These are the key instruments to activate development, not only for the students' learning but for the teachers themselves.

Furthermore, teachers need more power to explore teaching and learning in the classroom and its capability to develop intellectual skills and higher level thinking. This requires commitment at all levels — policy development, professional development funding and organisation, teacher preparation, school leadership and classroom practice. Teacher 6 claimed:

Teachers can make a difference and therefore credibility must be given to teachers as powerful change agents in FTT.

Teacher 5 also stated that the teacher should be able to prepare students to learn and interact positively with others to enhance learning in the classroom:

Attention is required to enhance teacher change in attitudes, beliefs and practices and promote teacher as role models. Teacher needs to put into action the importance of training feedback and learning outcomes.

Limited participation

It was clearly noted that there was inconsistent and insufficient participation of teachers at the training workshops conducted by the Ministry. Some Food and Textiles Technology teachers were not able to attend the training. Often these were teachers who also taught other subjects. As principals often “favour” core subjects like English, Maths and Science, professional development for teaching and learning in these subjects is given priority. During the training, the beginning teachers in particular lacked the information on the knowledge base and the research skills that they should learn from the professional development. Teacher 2 said:

Teachers can improve learning if they are passionate to learn more content of their own subject areas. They need to read, research, investigate and practice. Teachers need to be confident in their FTT [Food and Textile Technology] skills to acquire new information, to promote learning more effectively and create interactive learning experiences.

Then Teacher 2 suggested:

I want more professional development of teachers under the leadership training and partnership with the Faculty of Education lecturers and stakeholders from the Ministry of Women and Youth development. I also think that working collaboratively with the Faculty of Education lecturers at the National University in conducting trainings that can be able to merge the use of equipment and tools (resources) available at

the University. The lecturers at the University would also help with the new teachers to examine their own practice in the light of achieving and supporting their goals.

Professional development should be primarily school-focused and embedded in the job of teaching. As Fullan (1998) indicated, to create these conditions to support teacher learning and development, teachers must hold their discussions within their school context and these discussions need to occur over a sustained period of time. The teachers interviewed as part of this project had views which aligned with Fullan's research, and advised that they really needed to have conducted more learning activities in their teacher training programmes.

Conclusion and recommendations

Effective professional development requires groups of teachers to work actively and collaboratively together (Stoll, 2000), and developments in Food and Textiles Technology mean that teachers need to plan for this to occur. The mentoring occurring in one of the schools was a positive development. However, effective learning is not just about building teacher knowledge, it is also implies that learning should be transferred to classroom practice (McDonald, 2010).

It was clear, however, that a range of learning activities from the teacher training workshops were of value for the contexts but the transfer of this learning to the classroom was not always well planned. A strategic approach needs to be adopted including planning for before, during and after training. Attention should be given to specific transfer strategies, motivating teachers to transfer their learning and ensuring there is support for the Food and Textile Technology teacher on return to their school settings (McDonald, 2010).

When the Ministry conducts monitoring visits, it is important to generate a report on the spot for any particular teacher who has worked extra hard to achieve a reward. This approach would be good motivation for hard-working teachers who themselves have motivated students in the classroom. Such a report would also be effective as it would encourage teachers to further promote student motivation, class participation and individual learning strategies for improved student learning outcomes (Ross & Bruce, 2007).

It is also important to note that the teaching and learning will be successful only if administrators and educators alike are adequately prepared with the skills, knowledge and positive attitudes associated with this subject area. Therefore, training and workshops for Food and Textile Technology teachers should emphasise, not only skills and knowledge, but also develop a positive predisposition towards the subject so it can act as a doorway into a career that could support families and promote economic growth. Collaborative and collective professional development by teachers will improve their skills and capacities to teach the curriculum in schools effectively and so allow this to happen. West (1994) concludes that teacher professional development is the bridge that links whole-school improvement with the changes in teaching practice that are fundamental to improved student learning. Similarly, Fullan (1994) cites evidence

from case studies of improvements in student reading abilities was linked to highly focused and carefully designed staff development. In the light of emerging evidence, the relationship between teacher learning and student learning is the fundamental issue to be addressed. Research can also look at how a teacher can contribute to improvements in student learning outcomes. The findings of this study remain important to the planning of the future professional development of teachers. As Teacher 1 said:

It is crucial for teachers to be confident in teacher learning and be the role models.

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