

ONE SIZE DOESN'T FIT ALL: TEACHER EDUCATION IN DEVELOPING PACIFIC ISLAND COUNTRIES

Penelope Serow, Neil Taylor, Greg Burnett, Terence Sullivan,
Dianne Smardon, Jodana Tarrant, and Emily Angell

University of New England
Australia

Abstract: *In global terms, the world is facing chronic teacher shortages “that will persist beyond 2015 for future decades to come if current trends continue” (UNESCO, 2013). UNESCO reports that the East Asia and Pacific Region need to fill an additional 57,000 teaching positions to achieve universal primary education standards. The closing of the global teacher gap requires development of new policies and strategies in hand with a financial commitment that has a long-term focus. In one developing Pacific Island country, a new model is being implemented where they have partnered with an Australian university to develop quality teacher education programs with a Pacific focus. This article will report on the needs analysis, the development of this strategy, the design hurdles, and the implementation phase of the project.*

Key words: Pacific Island countries, flexible or blended delivery teacher education

Introduction

Developing Pacific Island countries, frequently in isolated locations, battle with a heightened lack of available local teachers and often call on expatriate teachers on fixed-term contracts to teach in their schools. Whilst this alleviates the immediate need of physically having a local teacher in front of a class of students, the financial commitment to this process does little for sustainable development of local teachers.

Another strategy implemented by aid agencies has centred upon the funding of local teacher training institutions that operate independently. Teacher training institutes in smaller developing nations have struggled to find suitably qualified and experienced academic staff and to develop quality teacher education programs that are internationally comparable (Serow, Tobias, & Taylor, 2013).

Quality education is generally considered to be a key determinant in building social

capital and consequently improving economic and social development. There is now general consensus that success and failure in achieving quality education lies primarily in the hands of classroom teachers (Lingam, 2012), and it is vital to recognise the centrality of the classroom teacher's role in this. In particular, it is the professional competence of teachers that is considered the most important contributing factor in improving the quality of education, as teachers are responsible for translating curriculum, resources, and educational policies into effective practice (Gamage & Walsh, 2003; Grodsky & Gamoran, 2003). The professional competence of teachers, however, depends to a large extent on the quality of their preparation and, in particular, the courses in the pre-service programme, which must be aligned with and relevant to the work and responsibilities teachers will meet inside and outside the classroom (Gendall, 2001).

Developing Pacific Island countries in the South and Central Pacific, many in extremely isolated locations, struggle with

a lack of well-trained local teachers. This is often because of poor quality teacher training institutes which lack suitably qualified and experienced academic staff and consequently fail to develop quality teacher programs that are internationally comparable (Serow et al., 2013). One such case is the Republic of Nauru; where until recently, all efforts to implement effective teacher education have had very poor outcomes, leaving the country with an acute shortage of properly trained teachers. To some extent employing expatriate teachers on fixed-term contracts has alleviated this problem. Whilst this meets the immediate need of physically having a teacher in front of a class of students, the financial commitment to this process does little for sustainable development of local teachers.

This paper presents a new model of teacher education recently implemented in the Republic of Nauru. In this model the Nauruan Government has partnered with the University of New England to develop quality teacher education programs with a Pacific focus. The initial program commences with an Associate Degree in Teaching (Pacific Focus) that is aligned to the Australian Quality Framework. This will feed into a further Bachelor of Education (Pacific Focus) qualification. The blended delivery model, as the model offers online teaching material with Aid-funded additional on-island support. As the students remain in the context of their community for their studies, the delivery and assessment for learning practices within the course are responsive and relate directly to the wider school community of their Pacific Island country. Building local educator capacity with a view to the provision of future mentoring of students completing international teaching qualifications is a key aspect of the programme.

Context

The Republic of Nauru, formally known as Pleasant Island, is an island country located in Micronesia in the Central Pacific. Nauru's population is approximately 10,000. For an island of 21 square kilometres, it is well known globally as one of the three great phosphate rock islands of the world. The mining of phosphate deposits provided substantial wealth to the island inhabitants in the late 1960s and into the 1980s. For some of this period, Nauru had the highest per-capita income of any sovereign state of the world. As a result of the extensive mining, Nauru has very little capacity for industry and the large area that has been mined is uninhabitable and requires the completion of a massive rehabilitation program. After exhaustion of the phosphate deposits in the 1980s, Nauru became well known in Australia for the opening of Australian Government Detention Centres for the assessment of asylum seekers for refugee status.

The Nauru Teacher Education Program

The Nauru Teacher Education Program (NTEP) begins with an Associate Degree in Teaching (Pacific Focus) in accordance with the Australian Quality Framework with a pathway to be developed of a further two years equivalent to achieve a Bachelor of Education (Pacific Focus). The mixed-mode delivery model offers a combination of online teaching material with Aid-funded additional on-island support. An essential component of the process is the mentoring aspect aimed at building a local team of educators with the capacity to provide local academic support to complete international teaching qualifications and so gradually requiring less in-country support from the university. To meet this goal, the program relies on online delivery of most resources. Required textbooks and large electronic files are freighted to Nauru.

Selection of candidates to undertake the degree involved an English writing and comprehension test administered by the University of New England to all Nauruan candidates. Based on the results of this test and review of each candidate's work experience and qualifications, 47 candidates were offered placement in the Associate Degree. Two additional students were offered candidature in the Masters of Education Program at the University of New England.

Prior to beginning the Associate Degree in Teaching (Pacific Focus) in Trimester 1 of 2014, all candidates (with the exception of candidates in Secondary Education specialising in science and mathematics) were required to complete 'literacy and numeracy enabling units' which targeted prerequisite content knowledge in these areas required for teacher education studies. This is particularly important as the majority of pre- and in-service teachers enrolled in the program from Nauru require extra support in the areas of literacy and numeracy to prepare them for tertiary study. Candidates in Secondary Education with a specialisation in science are required to complete pathway units in English, maths and science prior to beginning the degree, and candidates in maths are required to complete an enabling literacy unit and a pathway mathematics unit. In addition, the first cohort of students undertook an 'Introduction to Academic Culture' program to prepare them for the level of academic rigour expected in the degree. In total, 41 students successfully completed the Academic Culture program, delivered by the university's English Learning Centre staff. The group of 12 students who joined the group in Trimester 1 2014 completed a short introduction to academic study but did not complete the full academic culture programme. These students were additionally mentored and supported by their local peers.

Getting effective infrastructure and a high level of academic support in place has been key to the successful implementation of NTEP. This has involved the delivery and installation of state-of-the-art IT equipment and internet/networking capabilities providing students with the resources they need to successfully complete their course work. To date, a suite of 20 MacBook Pro laptop computers, a lockable charging trolley, two data projectors, three iPad minis, and two printers have been installed. Macintosh computers were chosen specifically because of their superior security capabilities, which reduce the risk of viruses entering the systems and network. Furthermore, the computers have been customised to disable the saving of files to the computer desktop. Students must use dedicated SD cards (which have been provided) to store material rather than flash or thumb drives as this further reduces the chances of infection by viruses. On-line access has been provided through the installation of five modems. At this stage, the modems are on a residential mode of access. Students now have access to the University of New England online delivery platform, Moodle, and have been successfully enrolled in the enabling and pathway units via the online registration platform. All of the provided technology infrastructure will remain with the Nauru Ministry of Education for use beyond the specified project. As such, it is essential to the sustainability of the program that this equipment be effectively cared for and maintained.

On-island and online support from key personnel has also been crucial to the successful implementation and continuation of NTEP. This is particularly true given the geographical isolation, somewhat limited infrastructure and consequent logistical problems. Initial support was provided by an on-island expert who for the first 6 months of the project, helped to establish the physical

infrastructure and oversaw the initial online enrolment of students. This individual also provided initial workshop sessions each afternoon during the week and an additional session on Saturday mornings, with further online support from the university-based unit coordinators of the Maths and English enabling units in Australia.

Beginning in January 2014, (when the students commenced their formal candidature in the Associate Degree), this support was significantly increased with the provision of two on-island lecturers and two Australian-based lecturers who are dedicated specifically to this cohort of students. The unit coordinators from the university periodically visiting Nauru to deliver face-to-face intensive schools for their particular units have and will provide further support.

However, level of external support will be difficult and costly to sustain over the long-term, it is envisioned that successful students who complete the Associate Degree will be able to fill these support roles if the Government of Nauru continues support for these Australian based teacher qualifications. To this end, an action item has been raised to identify Nauru Department of Education personnel who will be able provide mentoring to current and future cohorts as tertiary training and support staff.

Associated Research

While the core business of NTEP is to provide Nauru with a cohort of well-trained early childhood education (ECE), primary and secondary teachers, it also has an associated research component. This is aimed at generating empirical evidence that will assist in refining and improving the teacher education, as well as disseminating the outcomes of the program to a wider audience.

Methodology

One component of the research that is presented in this paper, involved inviting the participants in the program to complete an online reflective journal with the same six questions asked at the beginning, middle, and end of each trimester. The main aim was to provide a space for students to reflect upon their journey as a teacher and to provide an avenue for the research team to view their own progression and what they felt they needed to progress further. The journal was created using Qualtrics software (<http://qualtrics.com>) where the students were provided with a link to five reflective questions via their student email. An introductory instruction asked the students to create an individual anonymous identifier to enable subsequent longitudinal analysis. The five reflective questions are:

Q1. Becoming a skilled teacher is a long journey. Right now, how would you describe where are in your development as a teacher?

Q2. Considering where you are on your journey to becoming a teacher. Where do you think you need to go next on your journey? What will help you get there?

Q3. What challenges have you experienced lately and how have you managed them?

Q4. Give examples about how you feel about the UNE course at present.

Q5. During the course you will focus on different aspects of teaching and learning. Write three words that best describes what you have been thinking about in terms of good teaching this week.

The analysis of the first set of 36 entries required a systematic content analysis to identify common themes. The timing of participants' response to this was at the beginning of first trimester (Feb 2014) of the Associate Degree in Teaching (Pacific Focus). In respect to the Nauruan cohort for 2014, approximately 75% of the students had completed two enabling units

in literacy and numeracy in Trimester 3 (Oct 2013 to Jan 2014).

Results and Discussion

Question 1

Responses to: “Becoming a skilled teacher is a long journey: Right now, how would you describe where you are in your development as a teacher”, were categorised into five themes. The most common theme occurred in 50% of participants stating that they were at the beginning of their journey as a teacher. The responses indicated that they did not view themselves being developed in any way as a teacher at this early stage. They viewed themselves as ‘clean slates’ in terms of teacher development. Examples of this include:

I’m just at the beginning of a very long journey. This is the cornerstone of my future career.

I’m feeling nervous at the beginning of this long journey of teaching because I don’t have skills for teaching.

Six of the responses centred upon having experience as a teacher but not possessing the formal qualification required. They viewed this project as an opportunity to gain a teaching qualification, which they generally equated with being a professional teacher. One student stated:

I have experience but I need more training.

Nine of the students stated that they already possessed teaching skills, and they viewed this program as ‘value-adding’ to their existing skills. Examples include:

I am halfway there. Looking forward to more knowledge and skills adding to my teaching profession.

One of the responses in this theme described herself as currently developing as a professional teacher. She connected the course material to her own classroom experiences and stated:

I say I’m there. I’m professional enough to handle students especially the ones in the Kindergarten School. I’m able to manage them well with all the help from the teachings on how to become a good and professional teacher, but I know that there is more to learn in order continue and survive my long journey, and one thing I noticed why I’m surviving and enjoying teaching right now is because I believe that I have skills and I’m always in the mood of seeing a child achieve because of all the effort that’s been put in.

Two of the students described themselves as being “lost”, “lonely”, and at an unstable stage in their journey. Both students described that they were currently challenged by the course material, and commented on the level of commitment required. It is interesting to note that social aspects of their lives were changing as a result of their studies.

I’m at the weird and funny place where I’m not qualified enough to be delivering quality learning yet due to the unfortunate circumstances here on Nauru, I am in the classroom everyday teaching. So I’m qualified enough to be IN the classroom but also not qualified enough to be delivery (effectively) quality outcomes. Like I said, weird and funny place I’m in. Funny, sad really.

The remaining student commented on her need to “improve in English” and that she felt a “bit pressured”. Whilst only one response indicated a need to develop her English language to communicate in writing, this was observed as a consistent

factor amongst most participants in the program by the research team. It is interesting to note that instruction in Nauruan schools is both in Nauruan and English with written communication in English from Year 1 to Year 12 (Republic of Nauru Education Department, 2013). Despite this, developing skills associated with the English language is an important component of their studies.

Question 2

The participants were asked to respond to the following question: ‘Considering where you are on your journey to being a teacher, where do you think you need to go next on your journey? What will help you get there?’

For three of the participants, this question came rather too early in the course for them to answer:

To be honest I really don't know, but I am willing to go wherever the education of Nauru is taking me. Because truly I cannot afford what they are offering me, which is a generous offer one had to accept.

However, ten of the participants, particularly those (Nauru Teacher Institute) NTI students who were not currently teaching, were concerned about their confidence to teach.

I also need to improve my class presentations (that is my confidence in myself) I need to have the courage to stand in front of the classroom when parents and communities are around.

This appeared to link to the lack of actual teaching experience of this particular group most of whom have yet to experience any actual teaching experience.

Next on my journey would actually being a teacher and having a class of my own. I think the only thing that would help me now is me motivating myself to work harder and never give up.

Some of the participants (7) viewed improving their pedagogical content knowledge (PCK) as key to moving forward as a teacher.

My next step is to teach children in an effective way, more hard work to be done and more help and support from coordinators, lecturers and colleague.

I need a diploma and content knowledge.

This desire to improve Pedagogical Content Knowledge (PCK) also links to confidence in teaching as research has revealed a link between effective PCK and teacher confidence (Friedrichsen et al., 2007).

Finally, eight participants interpreted this question in terms of their long-term goal for the course and thus completing the qualification.

Specifically, that is to move towards attaining quality qualifications such as the Associate Degree and Bachelor degree so as to build upon and continuously improve my skills, knowledge and attitudes that I am imparting in the school environment everyday.

While this may have represented a misinterpretation of the intentions of the question, it did reflect well on their overall enthusiasm to complete the degree.

Question 3

The participants were also asked about the challenges they faced undertaking the Associate Degree, specifically, ‘What challenges have you experienced lately and how have you managed them?’ Perhaps not surprisingly ‘time management’ was the most significant challenge, particularly for those participants who are full-time teachers and coming to classes in the evenings and on Saturdays. The majority of responses (15)

focused on the issue of meeting submission deadlines for assignments.

I have experienced number of challenges throughout this journey...and the common one is LATE SUBMISSION and I've learned my lesson that 'Time Management' is important! And as we all know the phrase – 'Time and Tide waits for no-man'.

Even the practicalities of arriving at sessions on time required significant pre-planning as Nauru has no system of public transport and although the island is small this can make travel difficult.

Trying to arrive in class on time despite the lack of transport and rainy weather. I try to get ready earlier than expected so I can have time to plan ahead.

However, it was encouraging to note in many of the responses indicated, that the teachers were coming to terms with this despite the hard work and sacrifices involved and this suggested a significant commitment to complete the Associate Degree:

The biggest challenge thus far has been Time! Most days I find, I have so much to do and not enough time to do them all in! My first step towards managing this is to draw up and follow a very specific and strict timetable. Every waking moment is accounted for. There is no such thing as 'free time'.

Closely related to the issue of time management were challenges associated with work, study, and life balance with five participants highlighting this:

The challenges I have been facing right now is being three types of person at the same time, a mother, a teacher and a UNE student. It is quite a difficult experience because this is new to me. However I managed well by keeping up with

the time management and making a lot of sacrifices.

Like I said before, juggling my career, my wifely and motherly duty is my greatest challenge as a UNE student. Following the schedule and attending everyday at the UNE class is the only manageable way I can afford to manage.

The majority of those undertaking the Associate Degree are females working full time and striking a balance between their family, work and study understandably poses a significant challenge. This is particularly true in Nauru where family size was 4.2 children per woman, according to the 2011 census (Government of Nauru, 2011). While the extended family still plays a significant role in easing the burden of childcare, some of these females are making a considerable sacrifice in order to study and this is highly commendable. One student, in particular is often in class in the evenings participating in tutorial activities with a young child asleep on her lap.

Outside of time management and associated family issues, coming to terms with the new technology was the next most significant challenge. This issue was raised by seven of the participants.

I was struggling from the new learning system ... how to do everything on computer because at my school we did everything using a pencil, pen and blackboard ...

I believe its online studies made it difficult for me due to ICT skills that I lack, but with the frequent use of technology through the UNE online study I've managed to get my way through with the support from my UNE colleagues.

Again this response was not unexpected as many of the participants began the Associate Degree with very low level computing skills. Some had never used a

computer and none had used a learning platform such as Moodle. Consequently, the ‘learning curve’ in this respect was extremely steep. However, as the second quote suggests, the participants rose to the challenge of coming to terms with the new technology admirably.

Finally, two participants commented on the hot and humid classroom environment in which teaching occurs. This is a problem for lecturers and students alike and is on-going concern.

Question 4

In response to the fourth online question: Give examples about how you feel about the UNE course at present. Figure 1 provides a visual representation of the participants’ responses, using free online software called Wordle (Feinberg, 2013). This provides a comparison of the frequency of types of examples chosen by the 36 students to explain how they are feeling. The larger the font used in the diagram, the higher the frequency of that feeling.



Figure 1. Wordle. Question 4: Give examples about how you feel about the UNE course at present.

Predominantly, the students are feeling challenged and excited about the teacher education program. A key component of the delivery is on-island support and online support for the cohort of the students. It is promising to find that this is currently felt by many of the students. A range of other feelings was expressed, such as feelings of enjoyment, motivation, interest and moving-forward alongside scared, nervous, afraid and anxious. The willingness to express feelings and reflect upon emotions is an important area of teacher development that is targeted in this program.

Question 5

In response to the online question: During the course you will focus on different aspects of teaching and learning. Write three words that best describes what you have been thinking about in terms of good teaching this week. Figure 2 provides a visual representation, again using Wordle (Feinberg, 2013), which provides a comparison of the frequency of the three words chosen by the 36 students to describe their teaching/learning focus at present.

References

- Feinberg, J. (2013). Wordle beautiful word clouds. Retrieved from <http://www.wordle.net/>
- Friedrichsen, P., Lankford, D., Brown, P., Pareja, E., Volkmann, M., & Abell, S. (2007, April). *The PCK of future science teachers in an alternative certification program*. Paper presented at the National Association for Research in Science Teaching Annual Conference, New Orleans, LA.
- Gamage, D., & Walsh, F. (2003). The significance of professional development and practice: Towards a better public education system. *Teacher Development*, 7, 363-379.
- Gendall, L. (2001, December). *Issues in pre-service mathematics education*. Paper presented at the New Zealand Association for Research in Education Conference, Christchurch, New Zealand.
- Government of Nauru, (2011). *National report on population and housing*. (Census 2011). <http://www.spc.int/prism/nauru/index.php/population-censuses>
- Grodsky, E., & Gamoran, A. (2003). The relationship between professional development and professional community in American schools. *School Effectiveness and School Improvement*, 14, 1-29.
- Lingam, G.I. (2012). Beginning teachers' perceptions of their training programme: Lessons from the experience of a cohort of Vanuatu Institute of Teacher Education graduates. *Creative Education*, 3(4), 439-447.
- Sanga, K. (2005). The nature and impact of educational aid in Pacific countries. In K. Sanga, & A. Taufe'ulungaki (Eds.), *International aid impacts on Pacific education* (pp. 17-46), Wellington: He Parekereke, Institute for Research and Development in Maori and Pacific Education.
- Serow, P., Tobias, S., & Taylor, N. (2013). Mathematics curriculum development in the Republic of Nauru: Local teachers' perspectives. *Journal of the International Society for Teacher Education*, 17(1), 168-176.
- Qualtrics (2014). Qualtrics online survey software and insight platform. Retrieved from <http://qualtrics.com/>
- UNESCO (2013). *A teacher for every child: Projecting global teacher needs from 2015 to 2030*. (UNESCO Institute for Statistics Fact Sheet, Oct 2013, No. 27). Retrieved from <http://www.uis.unesco.org/Education/Documents/fs27-2013-teachers-projections.pdf>

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Authors

Penelope Serow, Neil Taylor, Greg Burnett, Terence Sullivan, Dianne Smardon, Jodana Tarrant, and Emily Angell are a team of researchers from the School of Education, University of New England, Australia. The team's interests include enhancing education in developing nations and developing local teacher capacity in Pacific Island Countries.

Penelope (Pep) Serow is a Project Leader of the Nauru Teacher Education Project at the University of New England. Pep's research interests include ICT as a teaching tool in the mathematics classroom, mathematics curriculum development in developing countries, and building local teacher capacity in Pacific Island Countries.

Neil Taylor is Professor of Science and Technology Education at the University of New England in New South Wales, Australia. Neil is a Project Leader of the Nauru Teacher Education Project (UNE). He has worked as a secondary level science teacher in Jamaica and the UK, and at the tertiary level at University of the South Pacific and the University of Leicester in the UK before moving to Australia.

Greg Burnett, Senior Lecturer in education at the University of Otago in New Zealand, is currently working as In-country Lecturer in Pacific Education, for NTEP (UNE) in Nauru. His own history is intimately entwined, altogether, personally, socially and professionally with a number of Pacific Island countries and their education systems, including Nauru where he previously taught as a primary school teacher. His research interests include postcolonial theory, critical discourse analysis, teachers' lives and the very intriguing politics of culture and identity in Pacific education policy and debate.

Terry Sullivan provides support to colleagues who are on-campus at the University of New England and to colleagues and students who are on-island in Nauru. His research interests lie in the personal and professional development of leaders and teachers in remote areas via the delivery of blended learning technologies.

Dianne Smardon is working with the NTEP as In-country Lecturer in Pacific Education. Her previous roles have involved facilitating professional learning opportunities for school leaders and teachers in curriculum, leadership and assessment. Dianne has a deep interest in developing learner's critical thinking and reflective practices. She has a strong belief in the agency of learners, honouring the voice of students, teachers and school leaders and in working in dialogic ways.

Jodana Tarrant is a Lecturer in Education (Pacific focus) and is of Australian and Pacific Islander heritage. Jodana is currently undertaking her Masters in Education (Research), investigating the impact of professional field experience of remote pre-service teachers, in regional settings.

Emily Angell serves as project coordinator for the Nauru Teacher Education Project at the University of New England Having worked in various international contexts--in the US, Costa Rica, and Australia. Emily brings a background in applied, outdoor and leadership education and has worked on both the administrative and field sides of international education and sustainability projects.