

CHAPTER 13

Ko hota fa'ungamotu'a ko hota kaha'u¹² – A knowledge system for redesigning Tongan curriculum

Seu'ula Johansson Fua

Introduction

For a couple of weeks, Tangikina, my nine year old niece, was not too keen on going to school, particularly on Friday afternoons. In preparation for the coronation of our new King George Tupou V, an estimated 6000 primary school children were to perform a *ma'ulu'ulu* (sitting dance). Imagine 6000 children filling up a national stadium performing one dance! Imagine the logistics, the hours of rehearsal, the costumes and the excitement! To perform for His Majesty at the coronation is an honour that was to go down in history. But this was an honour that Tangikina was not quite prepared to imagine. She was still struggling to understand how the *ma'ulu'ulu* was part of her education. I had often heard her complain, *ʻoku ʻikai fai ha ako ia he ʻaho ni, ko e ako ma'ulu'ulu pe* (there is no learning today, we are just learning the *ma'ulu'ulu*).

Tonga, like most Pacific countries, was introduced to formal education through the work of missionaries in the 19th century. This form of education, with prescribed curriculum and complementary pedagogy to serve a particular agenda of its time did not, of course, reflect Tongan knowledge systems that had already been in existence. The Science curriculum, for example, did not recognise Tonga's advanced knowledge of astronomy, meteorology, physics or engineering. The introduced formal education of the time, either by choice or by ignorance, did not recognise Tonga's traditional education system with its prescribed curriculum, associated pedagogy, assessment and evaluation processes. Over time, the 'development' of education in Tonga has been built upon the introduced curriculum and pedagogy to a point where two general sets of knowledge systems (KS) exist. The KS provided and perpetuated in the formal education system strongly reflects the world outside Tonga, and the 'alternative' KS of our ancestors, trialed and tested over millennia, continues to survive in the informal education arena.

¹² Our traditional knowledge is our future.

Today, long after the missionaries have gone, Tongan educators are rethinking and redesigning the curriculum, pedagogy and educational agenda. The justification for 'rethinking' has been covered sufficiently and eloquently in other works¹³; therefore I will not dwell further on this beyond saying that I hope one day soon Tangikina will learn to appreciate the *ma'ulu'ulu*, and its associated body of knowledge, skills and values, as part of her learning at school.

In this discussion, I suggest some strategies for moving forward in rethinking Pacific education; for redesigning curriculum and pedagogical approaches based on context specific knowledge systems. The strategies suggested are based on experiences and lessons learnt from Tonga.

The Institute of Education at the University of the South Pacific (IOE/USP) recently completed the Sustainable Livelihood and Education in the Pacific (SLEP) pilot in Tonga. By sharing lessons and findings from the SLEP project, I wish to demonstrate the application of the following key strategies for advancing work on the redesign of curriculum:

1. SLEP project strategies
2. Researching Tongan KS
3. Tongan KS for education for sustainable development
4. Translation of KS into curriculum and pedagogical frameworks.

By demonstrating these strategies for redesigning curriculum, I also draw attention to issues of equity, access and relevancy of the curriculum. My argument here is that when the KS in the curriculum and the pedagogical frameworks are congruent with the educational needs of the country then issues of equity, access and relevancy are addressed.

Project strategies for SLEP

In 2006, NZAid commissioned the USP to conduct a study identifying key strategies and policy options that national Ministries of Education (MOE) could adopt to assist in the alleviation of hardship in the region. The IOE was given the task of designing, in consultation with NZAid and

¹³ Benson, C., & Taufe'ulungaki, A. 2002. Tree of Opportunity: Re-thinking Pacific education, University of the South Pacific, Fiji.

national MOEs, a project to address this need. The IOE used the SLEP study as an opportunity to demonstrate the Rethinking Pacific Education Initiative for and by Pacific peoples (RPEIP) philosophy. RPEIP had also been funded by NZAid.

The design of the SLEP study represented a concerted effort by NZAid and IOE/USP to align the project with regional and global efforts to improve education by:

- supporting national MOEs' efforts to meet the Millennium Development Goals (MDG) relating to alleviation of poverty and achieving universal access to education
- providing a Pacific response to UNESCO's Decade of Education for Sustainable Development (DESD)
- meeting the goals of the Education for All (EFA) in the region by improving access to the school system for children living in hardship.

The purpose of the SLEP study was to identify the skills, knowledge and values that enable Pacific peoples to live sustainable livelihoods within their communities. It assumed that Pacific peoples have unique philosophies about 'education', 'poverty' and 'sustainable livelihoods' and that these Pacific KS constitute a valuable contribution to the global knowledge system. The study involved 9 villages with 80 households, 300 students, 40 teachers and 20 individual case studies.

Guiding principles for project design

The design of the SLEP study was based on several key principles believed to be pivotal to capturing the reality of Pacific KS, the alignment of multiple global, regional and national efforts to improve education, building capacity of Pacific educators and the maximisation of donor assistance. Two key principles are discussed here as suggestions for implementing a SLEP project, or projects wanting to achieve similar results. These key principles are based on RPEIP/Vaka Pasifiki philosophy¹⁴.

¹⁴ In the recent meeting of the RPEIP Advisory Board in Suva (USP, 2008) it was agreed that the RPEIP philosophy has developed into a movement and that it can now be referred to as the 'Vaka Pasifiki'.

Principle 1: Engagement with Pacific people

This principle assumes the following:

1. Engagement with Pacific peoples¹⁵ through processes that will provide encouragement and consequently enablement at multiple levels of engagement.
2. Reflection through purposeful review, evaluation and provision of useful and worthwhile feedback through restoration and development of Pacific philosophies.
3. Discussion is purposeful yet liberating and authentic with opportunity to honestly debate and critique information before it is widely disseminated to the Pacific and globally.

The engagement of Pacific peoples in the conceptualisation, implementation, evaluation and gifting of knowledge generated by research recognises their contribution, to and responsibility for, their own educational development. While the process of engagement recognises the strengths of Pacific educators, it also recognises the limitations for which capacity building is needed, and research projects should also serve to meet that need. For these reasons, and because the engagement of Pacific peoples in their educational development is pivotal to ownership and sustainability, the design of the SLEP project ensured that Pacific people were involved in every stage of the work.

Principle 2: Consolidation of Pacific educational development

This principle requires development projects to:

1. recognise regional studies¹⁶, both by Pacific people and non-Pacific people, and identify gaps where further work is much needed
2. use Pacific theories¹⁷ to guide project processes and implementation

¹⁵ Pacific people here refers to indigenous Pacific people (Polynesians, Melanesians, Micronesians) and people who have come to call the Pacific their home and work for this region including development partners.

¹⁶ ADB studies on poverty in the Pacific identified education as the key to alleviation of poverty. SLEP built on this understanding to identify specific educational strategies that can address this, as well as identifying conceptualisation of poverty and education from a Pacific context.

¹⁷ Theoretical works by Kōnei Helu Thaman, Ana Taufe'ulungaki, Seru'ia Johansson Fua, Imita Manu'atu.

3. use national MOE strategic plans¹⁸ to guide project design and implementation to ensure the project furthers the goals of national MOEs
4. ensure donor maximisation and synergy between development partners, national MOE and Pacific academic communities.

The project design recognised the regional work that had already been done by the Asian Development Bank on poverty and used this as a starting point to further the understanding on the role education can play in the alleviation of poverty. The project design was specific in approach yet multi-purposeful in meeting the needs of the national ministry of education, regional university and the development partners.

Application of key principles to Tonga

The SLEP project was offered to Tonga at a time when the Ministry of Education, Women and Culture (MEWAC) was embarking on a review of the primary school curriculum for Classes 1 to 7. Prior to the review activity, the Curriculum Development Unit (CDU) required information to inform the curriculum framework¹⁹ for the review. Additionally, the CDU was also interested in identifying KS that communities wished to be included in the revised curriculum.

The involvement of the Tonga Institute of Education (TIOE) was crucial to completing the research through to the application phase of the project. In applying the principle of engagement, it was important to have teachers and curriculum writers involved in the process of research, not only for capacity building purposes, but so that teachers and curriculum writers could work together to identify the KS that they would write and teach. Their involvement in the research process ensured consistency between the process of research, the translation of data into curriculum, and the teaching of the curriculum. In past practice, a disjointed approach left many gaps for misinterpretation of research data and curriculum statements which consequently impacted on teaching in the classroom.

18 Tonga Education Sector Study, Tonga Ministry of Education Policy Framework, Tonga Education Strategic Plan, Tonga Education Corporate Plan.

19 The CDU has completed a draft of the Tonga National Curriculum Framework and the findings from the SLEP study guided the framework.

Researching Tongan knowledge systems

Rethinking education involves re-questioning a total system of knowledge, processes and structures. Key to development is research. In order for research to reflect our realities, we must also re-articulate the way/s we investigate, the way/s we question, conceptualise and seek development.

Tongan KS is situated within a paradigm that is specific to Tongan philosophies,²⁰ beliefs and ways of being and it is crucial that the research approach is able to capture this reality in its intended form and structure. Traditional western research approaches have been widely used to study Pacific societies since the 'Contact' period. Such studies have been mainly conducted by outsiders attempting to look into the world of Pacific people. These studies have been limited in their ability to gather authentic data and provide in-depth analysis that captures Pacific communities in their reality, as seen by Pacific people. In recent times, Pacific researchers conducting studies into Pacific communities have continued to use traditional western methods of research that had been adopted by outsiders to study our communities. When doing such research, Pacific researchers are often forced to 'pretend' that they are outsiders to their own contexts and as such hide, ignore and play down the wisdom and insight that they have as insiders with the ability to gather truly authentic data and provide the much needed in-depth analysis.

Vaka Pasifiki philosophy encourages researchers to look to the source of their knowledge systems and conceptualise from that point. This approach prompts questions such as "What does research mean in my context?" and "How do we do it here?" For want of comparison or point of reference, I would argue that Vaka Pasifiki begins, but does not end, with a post-modern constructivism and social constructivism tradition, where the concern is not only with the individual's process of sense making but also the collective transmission of this meaning via cultural influences. But the Vaka Pasifiki philosophy also emanates from a strong Pacific tradition of scepticism and ways of creating and validating knowledge. The Kakala Research framework (below) is one of the many ways in which Pacific people have conceptualised teaching and learning and the creation of their own worldviews.

In line with the philosophy of *Vaka Pasifiki*, the nature of research and knowledge creation is evolutionary. That is, with each finding we become more certain of where to move next. Hence, the lessons learnt from the SLEP pilot in Tonga guided and encouraged similar approaches in other Pacific countries.

To capture a Tongan knowledge system specific to education, sustainable livelihood and poverty, the SLEP study used a Tongan research framework (Kakala) to guide the work: field research was guided by core specific Tongan research ethics, and adopted the use of Tongan-based research tools (*Talanoa* and *Nofo*), and the team members that designed and conducted the study were all Tongans.

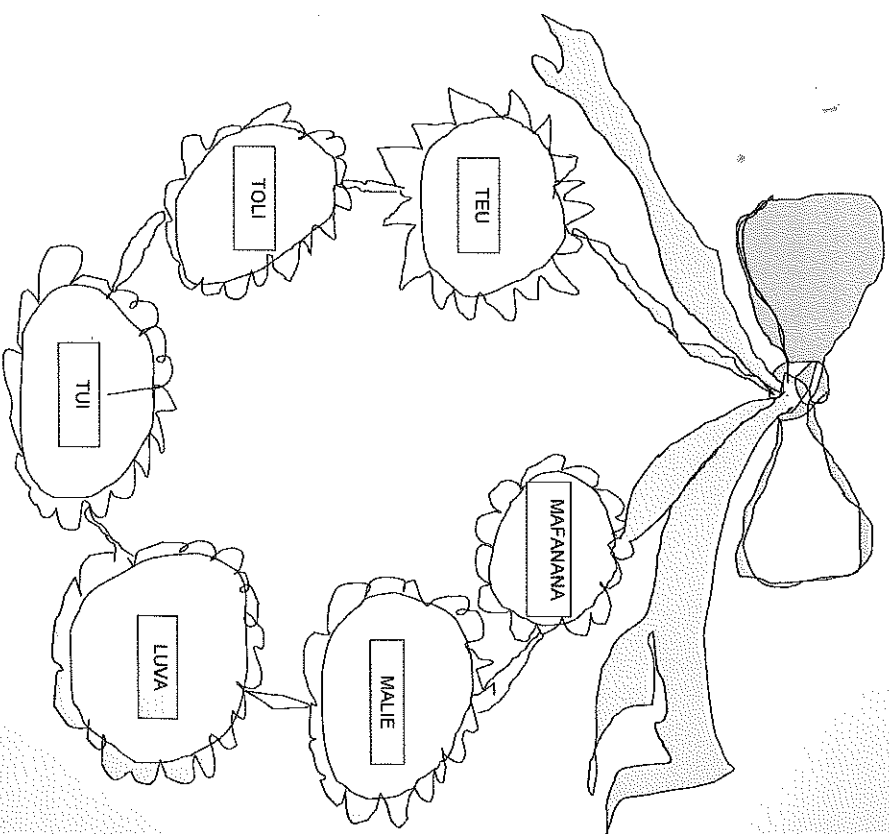
Kakala research framework

Konai Helu Thaman's original metaphorical framework for learning based on the *kakala* (garland) had three tiers: *Toli*, *Tui* and *Luvu*²⁰. With advice from Konai Thaman, and with reference to the seminal work of Linita Manu'atu²¹ the Kakala framework was enhanced by 'Ana Taufé'ulungaki and Seu'ula Johansson Fua for the SLEP study.

The Kakala Research Framework is now a six-tier approach to research in the Tongan context. With the work of Manu'atu (the *mfana* and *male* components) added to the framework, it now also contains an evaluation and monitoring system. I believe that with more usage of the Kakala framework, other dimensions of the framework will be revealed as more Tongans bring their unique understanding of the concepts into practice. The SLEP study represents a starting point that already indicates that much more of this rich metaphor remains to be explored in theory and in practice. The usage of Kakala by no means belongs only to those who strung this garland together – it belongs to all Tongans willing to use it.

20 Thaman, K. 1997. *Kakala: A Pacific Concept of Teaching and Learning*. Keynote address, Australian College of Education National Conference, Cairns.
21 Manu'atu, L. 2001. *Tuli Ke Ma'u Hono Ngahi Mohe: Pedagogical Possibilities for Tongan Students in New Zealand Secondary Schooling*, PhD Thesis, University of Auckland.

Figure 1: The Kakala Research Framework²²



22 As enhanced by Taufé'ulungaki and Johansson-Fua.

Explanatory notes

As a research framework, the following questions may be asked for each of the six phases of the Kakala Framework.

TEU: Conceptualisation: Perceptions, beliefs and philosophies

What is it? How do we define it? What does it mean for us? What is our source of conceptualisation? Who? Why? Structural and affecting agents?

TOL: Data Collection Methodologies – Talanoa and Nofo

Individual constructivism; collective construction/culture; tangible and intangible richness. Ensure authentic rich and descriptive data are collected with care and respect.

TUI: Analysis

What does it mean? Does it make sense? What is the context behind the context? Where is the solution here? Identify meaningful and sustainable strategies for addressing real problems.

LUVA: Reporting and outcomes

Reporting through various modes of presentation, return the gift to the people we took it from. Give voice to Pacific people; report with care and respect. Protect Pacific knowledge systems; ensure Pacific knowledge systems first serve the needs of Pacific people. Reporting for action.

MALIE: Relevancy and worthwhileness

Was the work worthwhile? Was it useful? For whom was it useful for? Did it serve the need of our communities? Did it make sense? Was capacity building maximised? Was the Talanoa Malie? Was the process meaningful for those that participated?

MAFANA: Application, transformation and sustainability

What were the outputs? Are the outputs tangible? Are they practical and sustainable? Can we sustain, nurture and apply these findings to our context? Were participants transformed, empowered to take action? What real change has occurred as a result? Were there multiple impacts as a result of the work? What has changed as a result of the work?

While the application of the Kakala Research framework is cyclic, it must also be recognised that the *Malie* and the *Mafana*²³ (refer to Chapter 11 of this book) components are used throughout the whole process as tools to monitor and evaluate. Using *Mafana* and *Malie* means that insiders, with their experience, wisdom and criticism, are the best people to evaluate and monitor the process. This represents a shift in thinking and application from western forms of evaluation, which take place at the completion of the project, are often conducted by outsiders and work from the premise that insiders lack objectivity and critical skills to form appropriate judgement on the work. If we accept that *Vaka Pasifika* is a paradigm shift from post-positivism and it takes its starting point from constructivism, the issue of objectivity is replaced by subjectivity and the value of the knower takes priority. The old belief that Pacific people lack critical thinking skills is seriously flawed. The skill of critical thinking is within context; surely one is better skilled at reflecting, judging and advancing new ideas when one is well versed with the context. Quite simply put, when I asked my nine year old niece why she did not like the *ma'ulu'ulu*, she jumped at the chance to offer me her judgement and her criticism. When I asked her to tell me why she did not like Maths, she just shrugged her shoulder and said, "I don't know."

Research ethics

Ethics, in the broadest sense, means a collection of values that together make up an ideology, a belief system, a philosophy and a way of being. If we accept that values are culturally biased and that the demonstration of values varies from context to context, then this also assumes that ethics for Pacific peoples are context-based. Research ethics in its most simple term refers to the behaviour and approach used by the researcher to conduct the study.

Pacific research ethics: Key features

Based on these beliefs, it is logical that research ethics reflect the context and culture upon which we do research and this serves several purposes.

²³ Manu'atu, 2001.

1. To access knowledge. Not all traditional knowledge is accessible. The researcher must respect the gatekeepers of Pacific knowledge, including when certain KS are not to be publicly shared even for the sake of our children's education.
 2. To build relationships between researcher and participants, in order to gain access.
 3. To ensure that the knowledge is authentic.
 4. To ensure that the knowledge accessed is understood within context thereby ensuring justice is bestowed upon the giver of knowledge as well as the 'borrower' of knowledge.
 5. To ensure that the knowledge is used for the benefit of the giver of knowledge.
- Given these key features for Pacific research ethics, there are several ways that Pacific research ethics differ from traditional western approaches.
1. Research ethics have to be lived (speech, dress code, body language and so on) by the researcher, not just described on paper. The researcher her/himself must behave according to the ethical guidelines that have been prescribed in accordance with the context that is being studied.
 2. Research ethics are defined by the culture of the context, not by the educational institute or by organisations.
 3. Research processes are constantly monitored according to the research ethics set out. This means that research ethics are not only confined to certain parts of the research process but the whole process is embedded in the ethical guidelines.
 4. Research ethics also guide how researchers relate both to participants and to other researchers in the team.
 5. The researcher is accountable to the people from whom he/she has collected the data, either through reporting back to the community or through other means of reciprocity.

Tongan research ethics

Three Tongan scholars have made the task easier by identifying the contexts of research, as well as the values and principles that should act as a preliminary guide to the research. The works by Konei Helu Thaman (1990), 'Ana Taufe'ulungaki (2003) and Timote Vailoleti (2003) have all contributed to clarifying Tongan values. From the collective works of Thaman, Taufe'ulungaki and Vailoleti, I have compiled four key ethics for the training of my field researchers in Tonga.

1. *Faka'apa'apa* (respect)
2. *Lototó* (humility, generosity)
3. *Fevetokaitaki* (reciprocity, cooperation, consensus, maintenance of good relationships)
4. *Fe'ofa'aki* (mutual love, caring, generosity)

When conducting research in Tonga, the behaviour of the researcher is pivotal to gaining access to KS. Pacific ethics, like Pacific cultures, are lived practices and the Pacific researcher who understands the context displays these ethics. In preparing field researchers for the field, considerable time is spent on discussing, relearning and practicing how core values are displayed in the field. The researcher must be more than culturally sensitive; s/he must be culturally literate in reading the terrain and skilled in demonstrating the right response to a terrain that is not always static.

Tongan research tools: *Talanoa* and *Nofo*

For the SLEP study, to ensure value and theoretical congruency between the research questions, research framework and research ethics, we needed research tools or methodologies that were in agreement. Therefore, to gather Tonga KS, we further refined the *Talanoa* research tool so it could be used by relatively novice researchers in the Tongan context. In response to criticism of *Talanoa* as a tool that can stand alone, we also designed *Nofo* as a research tool to complement *Talanoa*. Since, the pilot of SLEP in Tonga using *Talanoa* and *Nofo*, several studies in

Samoa²⁴, Fiji²⁵, Nauru²⁶ and in Marshall Islands²⁷ have also applied *Talanoa* and *Nofo*. In all contexts, the tools have gathered rich, descriptive and authentic data.

Talanoa as a research tool

Talanoa is complex and flexible (as indicated by the following) and therefore defies a simple definition.

1. *Talanoa* is a conversation, chat, sharing of ideas and talking with someone.
2. *Talanoa* comes in different forms. It can be formal, as in the case of between a chief/noble and his/her people, and it can be informal, as between friends in a kava circle.
3. *Talanoa* is also used for different purposes: to teach a skill or knowledge, to share ideas, to preach, to resolve conflict, to build and maintain relationships, and to gather information.
4. *Talanoa* is context specific with different purposes and forms, which consequently demand that the language and behaviour used change to reflect the context.
5. *Talanoa* is foremost a skill. Within this skill, there is associated knowledge about usage, form and purposes. The skill of *Talanoa* is also embedded in values and attitude. The context of *Talanoa* determines the knowledge, values and attitudes that should be associated with that event.

Talanoa is a term common to Tongans, Fijians and Samoans. It is a process that does not have to be formal or fairly structured. Vaoleteti (2003), arguing that the use of *Talanoa* methodology is a more culturally appropriate tool of investigation for Pacific Island people than Western approaches as it has synergy with Pacific people's way of life, defines *Talanoa* methodology thus: "*Talanoa*, then, is subjective, mostly oral and collaborative, and is resistant to rigid institutional hegemonic control" (2003:3).

²⁴ Silpa, 2007 Samoa Values Research (report).

²⁵ Nicola, 2008 Masters unpublished thesis, USP.

²⁶ Nauru Department of Education, 2008 PRIDE subproject Reorienting Y9 Curriculum.

²⁷ RMI Ministry of Education, 2008 REPED project Values Research for Marshallising and Vocationalising Y9/Y9 Curriculum.

1. When using *Talanoa* in research, several features are made explicit. *Talanoa* is a research tool, not a research framework, or research approach, which fits with a qualitative research approach. It operates from a constructivist perspective, whereby knowledge is socially constructed through the process of *Talanoa*.
2. *Talanoa* is primarily used for the purpose of data collection and data analysis. As such, the *Talanoa* process involves the researcher and participant (data collection) and the researchers (data analysis).
3. *Talanoa* is not an interview. *Talanoa* is a shift in thinking from semi-structured interviews; it is the loosest type of data-gathering tool. Interviews are approached with questions; the researcher asks certain questions and the participant responds directly (or sometimes not) to the questions asked. *Talanoa*, on the other hand, is based on an idea. The researcher takes the idea to the participant and then they talk about the idea. The idea is given to the participant to muse, to reflect upon, to talk about, to critique, to argue, to confirm and to basically conceptualise what he/she believes the topic to be.
4. *Talanoa* requires *Fanongo*: deep listening AND feeling/sensing. In research, the participants *talanoa* while the researcher/s *fanongo*. The most basic translation of *fanongo* is listening; however, just as *Talanoa* is more than interview, *Fanongo* is more than listening. To listen is to hear the literal meaning of the words. *Fanongo*, is most importantly, about listening to the silences. *Fanongo* enables the researcher to understand the silences, the implied meanings, what is not being said and the shared understandings. *Fanongo* is vital to continuing the *talanoa*. Through careful *fanongo*, the researcher will be able to generate, encourage and contribute to the *talanoa* in such a way that allows the participant to clarify their conceptualisation. When a researcher fails to *fanongo*, he/she will fail to *talanoa* in such a way that will enable the participant to conceptualise for him/herself.
5. *Talanoa* is naturalistic in nature; that is, to engage in *talanoa* one should be in the context and be part of the setting. From a naturalistic perspective, the researcher should try as much as possible to reduce his/her impact on the natural context of the participant and work in

such a way as to maintain the natural harmony, energy and spirit of the context. In practice, this means that if the researcher is studying a fisherman, the *talanoa* with the fisherman will be most productive when the fisherman is at work, be it at home, by the sea or amongst family and friends.

6. In *Talanoa*, the researcher is the research tool which, is all the more reason why the researcher needs to *fanongo* intently. Consistent with the naturalistic nature of *talanoa*, visual and audio recording instruments such as VDO and tape recorders are not used in the field. At most, the researcher may use a small notebook and pen to occasionally jot down key points. At the end of the *talanoa* session, the researcher must then quickly 'download' his/her mind by writing down or audio recording what has been said during the *talanoa* session. How does the researcher ensure that he/she has recorded the correct data? The skill of *fanongo* is vital to ensuring that all information is gathered correctly. As *talanoa* involves dialogue about ideas, the researcher should *fanongo* for key ideas, strategies, solutions and possibilities.

7. *Talanoa* is guided by key principles. In the case of Tonga these principles include, *faka'upa'upa* (respect), *loto fakatokilalo* (humility), *fe'ofa'aki* (love, compassion), and *feveitokai'aki* (caring, generosity). Without these ethical guidelines to guide the behaviour, the language and the approach of the researcher, the *talanoa* will not yield data that is rich, authentic and ground-breaking.

8. *Talanoa* is most productive when using the first language.

9. *Talanoa* is not limited by time or space; rather, the *talanoa* process defines time. The session ends when the participant decides that it has ended for that time. However, *talanoa* can resume again in another time and/or place. Similarly, *talanoa* is not confined to a particular space or place. *Talanoa* can occur at home, in the village field, by the beach or wherever the participant takes the researcher. One *talanoa* session can take place in several locations depending on the nature of the *talanoa*. However, when *talanoa* is used for rituals and ceremonies it is often confined to a space of ceremonial importance and meaning.

Nofo

Nofo means to live, to stay and with the added suffix, *'anga*, becomes *nofo'anga*, meaning a place of dwelling. *Nofo* methodology here refers to the researcher going to live in the field with the participants. In this methodology, the researcher adopts a social anthropological stance, where he/she comes to live and experience the lives of the participants. This research tool promotes the opportunity for local researchers to take an emic perspective within their own cultural and social setting. This methodology is in line with the auto-ethnographic tradition of inquiry.

When *Nofo* is used a research tool, several key features are made explicit.

1. *Nofo* is a combination of observation, participant observation and *talanoa*. To *nofo*, one becomes part of the setting; the researcher must be immersed in the context to the point that they have minimal impact on the natural setting.
2. *Nofo* is heavily influenced by the ethical conduct demanded of the place. The researcher must be able to read the terrain and behave appropriately. In the Tongan context, if the researcher sees the participant sweeping or building a fire, the researcher must be right there helping and working alongside, as it is in the process of working together that s/he shows humility and willingness to learn.
3. *Nofo* is flexible and able to be adapted to suit the purpose of the research. It has been implemented in village contexts (Tonga, Nauru, Marshall Islands/RMI) and in school contexts (Samoa and Fiji).
4. *Nofo*, although traditionally taken to mean living or at least spending a few days in a place, can and has been adjusted to suit several purposes. In Tonga, field researchers spent a day in the field from seven in the morning until four in the evening for at least two days. In Nauru, the *Nofo* was reduced to one day and for five hours during one day of field work. Reading the terrain is vital to knowing how long a *Nofo* should take place.
5. *Nofo* can take place continuously within one setting or with several breaks in between field sites. In the case of Tonga, field researchers spent two continuous days in one setting before moving to the next.

In the case of Nauru and RMI, one field day per week was allocated for each setting.

6. *Nofo*, when used with *talanoa*, has been proven to accelerate data saturation within that particular field site. In Tonga, it was initially planned that field researchers would spend three days per village site, but after two days of field work, the data had already shown repetition.
7. *Nofo*, when used with *talanoa*, has also been shown to collect a vast array of KS and, with it, specific details regarding each system of knowledge.
8. *Nofo* was developed to complement *talanoa*. While recognising that Pacific culture is strongly oral in tradition, it is also in our silences and our behaviours that we 'speak' and relate to others. This is not always captured through a *talanoa* alone. When *talanoa* is combined with *nofo* a field researcher is better able to read the silences, the innuendo, the implied meanings and the hidden language of Pacific people.
9. *Nofo* was developed to allow the researcher to fully understand the context in totality. That is, the participant is understood within his/her context, taking into view his/her beliefs, relationships, circumstances, economics, politics and all aspects that make up this person's way of being. This means that the data collected is context-specific and it is understood within this particular context.
10. *Nofo*, when used in combination with *talanoa*, is a physically and mentally demanding form of research.

As research tools, *talanoa* and *nofo* sit within the *Toli* component of the Kakala research framework. While the main use of *talanoa* is to gather information, it is also used to make judgement on the *Malie* and *Mafana* processes. Within *talanoa* and *nofo*, the following techniques are used: *kumi*, *filifili*, *fehu'ia* and *vakili*. *Kumi* means to search. *Filifili* means using tested criteria to accept or reject data. The data is also questioned through *fehu'ia* and *vakili*, which is to examine the root of the subject through *Talanoa* or discussions or engagements with communities.

These research methodologies capture Pacific core principles of respect and reciprocity and values such as caring, helpfulness and love. When one comes to stay, sleep, talk, and to share stories, food and work, relationships are strengthened and social ties are built; people invest their social capital which they may then call upon in times of need. Therefore, the nature of the research methodologies necessitates the use of local researchers. By training local people to conduct research on their own settings, the research project not only supports the use of Pacific-based research methodologies as an auto-ethnographic approach, but more importantly contributes to the capacity building of local researchers and gives recognition and value to traditional ways of creating, transmitting, sharing and validating knowledge.

Tonga knowledge system for education for sustainable development

To demonstrate the robustness of the described research approach in identifying and gathering Tongan KS, I wish to highlight some of the key findings from the SLEP pilot study.

Conceptualisations of poverty

1. Hardship and poverty in Tonga is concerned with *'uhungunga* (attitude/behaviour). Poor attitude or a poverty of values is regarded as the most extreme form of poverty in Tonga.
2. A person who attains *mo'ui fakapotopoto* or sustainable livelihood is someone who fulfils all of his or her obligations. Culturally appropriate behaviour is central to this.
3. Respect or *faka'apa'apa* continues to be the most central attitude of Tongans' aspirations.

Conceptualisations of sustainable livelihood

To live a life that is sustainable within the Tongan context a person must display *mo'ui fakapotopoto*. The following are key characteristics of individuals who achieve *mo'ui fakapotopoto*.

1. They strongly believe that a livelihood can be earned in Tonga. Such a livelihood can be sustainable as well as enriching socially and economically.
2. Skills are learnt at home or in the community from parents or relatives. The home environment is also very supportive in fostering livelihood skills and talents.
3. People with *mo'ui fakapotopoto* tend to have a wide repertoire of skills and knowledge relating to improving livelihoods. Such people lead very active lives, are always in search of new ideas, innovations and experiments to improve livelihood. These people comfortably fuse traditional and modern skills in their craft.
4. They are always eager to share their skills, knowledge and talents with others, particularly with young people who, like them, were not successful at school.
5. They are firm believers in traditional knowledge and skills and are also keen on maintaining these traditional skills.
6. Their lives are guided by core Tongan values of respect, reciprocity, loyalty and love.
7. They do not shy away from cultural obligations to their families, church, community and country, and they are able to meet obligations within their means.

In spite of their own failures in school, they are firm believers in education and still believe that education is important to promote given talents.

Tongan conceptualisation of education in relation to sustainable livelihood

The SLEP data show that people living in hardship find it the most difficult to gain access to education. Education in its current status is exclusive and bounded by space, time and finances. Tongan understanding and beliefs about *ako* (education and learning) are, however, inclusive and unbounded by either space or time. *Ako* is also believed to have multiple teachers, with learning taking place close to the source of livelihood.

Ako also recognises that different children have different talents and capabilities and teaches knowledge, skills and attitudes appropriately. *Ako* extends beyond formal education; it includes non-formal and lifelong learning.

The data also show that *mo'ui fakapotopoto* is a way to overcome hardship. *Mo'ui fakapotopoto* is based on the holistic development of the individual, inclusive of spiritual, emotional, psychological, physical, economic and social well being. Such an approach is also conscious of the relevancy, meaningfulness and worthwhileness of the task. As such, a person's attitude is central to attaining *mo'ui fakapotopoto*. A person who lives a livelihood that is sustainable must be able to relate to his or her cultural and physical environment.

Based on these understandings of *ako* and *mo'ui fakapotopoto* as inclusive and holistic, any strategy to address hardship and poverty through education has to be from a broad inclusive perspective involving formal and non-formal education. The most effective way to target hardship in Tonga is from a multi-sector approach: not just the ministry of education, but a whole community including church, local governance, police, health, youth groups, businesses and other non-government agencies. As *mo'ui fakapotopoto* is based on the development of the whole person – spiritual, emotional, physical, economic and social well being – it takes multiple stakeholders to work together in encouraging such a life. A multi-sector approach will reflect Tongan thinking about education and child rearing; it takes a village to raise a child.

Translating the KS into the curriculum

Translating or incorporating researched KS into the curriculum is necessary to ensure that we move from 'rethinking' to 'redesigning' our education system. In the case of Tonga, the study findings provided direction as how best to integrate the KS into the curriculum. The fluidity of Tongan KS and its multi-disciplinary approach to learning and skills suggests that the best way to incorporate the KS into the curriculum is through an integrated approach that would see the KS being woven right across the curriculum.

Advantages curriculum reform

Findings from the study predict that weaving Tongan knowledge systems throughout the curriculum would result in:

1. improved attitudes towards Tongan knowledge systems from teachers who teach the subject and, consequently, improved students' attitudes about Tongan knowledge systems
2. a teaching and learning approach that is much more reflective of the principles of *ako* and *mo'ui fakapoto*: holistic, dynamic, interconnected and unbounded by subject field
3. a context-specific, relevant and meaningful curriculum
4. the sustaining of Tongan culture and, consequently, the survival of Tongan people.

Furthermore, the integration approach requires less time and resources and it helps clarify existing curriculum materials.

Emerging pedagogical framework for Tonga

One of the surprising findings from the SLEP study was the identification of the elements of Tongan learning style to be in the following order: *sio* – observation; *ala* – trial; *fanongo* – listen; and *ta* – perform. The identification of the learning style was continually validated with different participants through *talanoa* as well as during *nofo* where the process was observed. Findings from the study consistently show that participants learnt a new skill firstly by *sio* (observation), followed by *ala* (trial). In the process of learning a new skill, participants *fanongo* (listen) as they trial and perfect their skill. One of the important aspects of the Tongan learning style is that the evaluation of the skill occurs during the *ala* and *fanongo*. It is here in the process of learning that the apprentice is corrected, instructed and monitored. The *Tā* component, the final process, occurs when the apprentice performs and demonstrates the learnt skill that has already passed the evaluation.

To match the learning process suggested above, the process of teaching would be something like this: (1) *fakatauta* – demonstrate; (2) *kaunga ala* – trial together with the student; (3) *talanoa* – talk (monitor, evaluate, instruct); and (4) *sio* – observe (as the student performs).

While much remains to be studied about Tongan learning styles and the appropriate teaching pedagogy, what this study has clearly shown is that Tongans have a learning style particular to their context and their way of thinking. Unfortunately, the outlined learning style and suggested teaching pedagogy is currently absent from the Tongan classroom and implementation of this process would require much change to current teaching practice. For example, the evaluation and testing of students could take place during the process of learning. The current use of written tests also continues to prevent students from demonstrating many skills in an applied format with hands-on practice. The opportunity for students to practically demonstrate skills would allow for multiple skills to be developed, as well as learning the values that are associated with the applied skills.

The identification of a Tongan learning style and the suggested teaching pedagogy reveals several key understandings about Tongan epistemology. Findings from the study have shown that *sio* (observation) is the first step in learning and it is vital that the teacher demonstrates the skill, the knowledge and the associated values. Students are repeatedly instructed in the skill of *fanongo* (listening), but it is rarely taught sufficiently well to enable effective learning. *Fanongo* is a multiple-sensory skill that involves listening, feeling, thinking and observing, all of which students must become skilful in using for learning and as a key life skill for living in Tonga and in the global context.

Fanongo and *talanoa* complement each other to bring out the best of both skills. *Talanoa* is a skill that has yet to be fully explored as a tool for learning, evaluating, assessment and monitoring. And as much as *talanoa* and *fanongo* complement each other, the skill of *tā* (demonstration) is the key to moving the body of knowledge ('*ilo*) – as acquired through *talanoa* and *fanongo* – to demonstrated skill and lived values. When '*ilo* (knowledge) is demonstrated in accordance with the values and the context, *poto* (wisdom) is then achieved.

Seminal works by Helu Thaman (1991) and Kavaliu (1966) have already explored the relationship between '*ilo and *poto* for Tongans and established a platform for understanding Tongan epistemology. What I wish to add here is the importance of *tā* (demonstration) in the process*

of transforming 'ilo to poto. In the process of tū, the skills of talanoa, fanongo and sio are all interlinked.

The emerging pedagogical framework and the integrated approach to translating Tongan KS into the curriculum work to ensure that in redesigning the curriculum the values that underline the content are in alignment with the values of the pedagogy. What this means in practice is that when teaching about fishing skills, the teacher has to take the class to the ocean and demonstrate fishing skills.

Conclusion

One of the key outcomes of the SLEP study was the identification of strategies and policy options that the national MOE may adopt to alleviate hardship and improve the quality of education. While the project was basically a research study, it was important that the processes employed would encourage participating institutions and people to adopt the identified practices, strategies and policy options. Therefore, it was vital right from the beginning to have the CDU and the TIOE on the research team. Since the study has been completed, the CDU has developed a draft National Curriculum Framework based on findings from the study and the TIOE will soon begin a project to strengthen the research capability of the institute.

The Vaka Pasifiki approach is concerned with improving the quality of education in the Pacific region by ensuring that education systems are embedded in the values, knowledge and skills of Pacific communities. The argument has been that with an alignment of values between Pacific communities and education systems, the issues of relevancy, access and equity will be resolved and result in an improved quality of education. The SLEP project piloted in Tonga was an opportunity to apply *Vaka Pasifiki* philosophies to the identification of an indigenous KS and to translate that KS into a curriculum framework and a complementary pedagogical framework. The rich and authentic KS that was identified was made possible by the research approach which used Tongan researchers and was based on Tongan philosophy using Tongan ethics. The now identified Tonga KS about sustainable livelihood is a significant contribution to traditional understandings of poverty and sustainability. Furthermore, the identified learning styles of Tongans and associated teaching pedagogy

are also significant contributions to understanding Tongan epistemology. What the SLEP study has demonstrated is that research and curriculum reform can successfully be based on our KS and conducted by our own people. The SLEP study has also demonstrated a process where we can begin to redesign our curriculum so that it meets the needs and values of our communities.

While work remains to ensure that the curriculum and the pedagogy are thoroughly embedded in Tongan KS, the SLEP study has confirmed for Tongans what they have known all along: there is wisdom in the old ways.

P.S.

Tangikina my niece did go on to perform the *ma'ulu'ulu*. Happily!

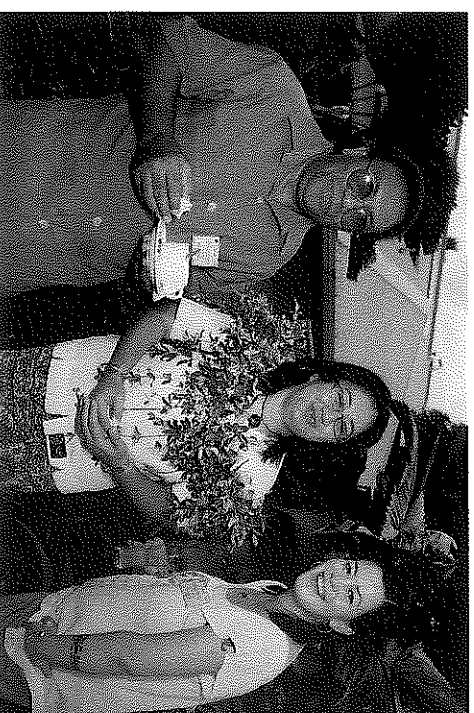
References

- Asian Development Bank. (2002). *Priorities of the poor in Papua New Guinea*. Manila, Philippines.
- Asian Development Bank. (2003). *Priorities of the people hardship in Vanuatu*. Manila, Philippines.
- Asian Development Bank. (2002). *Priorities of the people hardship in Samoa*. Manila, Philippines.
- Asian Development Bank. (2003). *Priorities of the people hardship in the Marshall Islands*. Manila, Philippines.
- Asian Development Bank. (2003). *Millennium development goals in the Pacific relevance and progress*. Manila, Philippines.
- Benson, C., & Taufe'ulungaki, A. (2002). *Tree of opportunity: Re-thinking Pacific education*. Fiji: University of the South Pacific.
- Health Research Council of New Zealand. (2003). *Guidelines on Pacific health research*. NZ: HRCNZ.
- Kavaliku, S. (1966). *Educational reorganisation for national development in Tonga*. Unpublished PhD Thesis, Victoria University of Wellington, New Zealand.

- Manu'atu, L. (2001). *Tuli Ke Ma'u Hono Ngaahi Mahie: Pedagogical possibilities for Tongan students in New Zealand secondary schooling*. PhD Thesis, University of Auckland.
- Silipa, S. (2007). *Values research Samoa report*. Samoa: National University of Samoa.
- Thaman, K. (1991). *Ako and Fai ako: Cultural values, educational ideas and teachers' role perceptions in Tonga*. Unpublished PhD Thesis, University of the South Pacific, Suva, Fiji.
- Thaman, K. (1997). *Kakala: A Pacific concept of teaching and learning*. Keynote address, Australian College of Education National Conference, Cairns.
- Taufe'ulungaki, Johansson Fua, Manu, Takapautolo (2007). *Sustainable livelihood and education in the Pacific project: Tonga pilot report*. Suva: Institute of Education, University of the South Pacific.
- Taufe'ulungaki, 'A. (2003). *Expectations of health care and of health professionals in the Pacific: An informed lay perspective*. Invited address given at the Pasifika Medical Association Conference, Warwick Hotel, Fiji.
- Vaioleti, T. (2003). Talanoa research methodology: A developing position on Pacific research. In *Pasifika Symposium 2003 Collection of Papers*. Hamilton: Wilf Malcolm Institute for Educational Research, University of Waikato.



Tangikina (right) with her older sister Langlangi, Education Day, August 2008.



L to R: B. Esibaea (Solomons), P. Southon (VUW) & C. Chu (VUW)