Discussions and Debates in Pacific Education

Edited by

JEREMY DOROVOLOMO, CRESANTIA FRANCES KOYA-VAKA'UTA, ROSANNE COUTTS, AND GOVINDA ISHWAR LINGAM

COMMON GROUND

The Learner

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Ms. Pam Bidwell has a passion for libraries, and believes that librarians have a key role in giving people access to information that can help to change their lives. Until recently she worked as a library educator based in Fiji at the University of the South Pacific, and she has also worked and taught in libraries and academic institutions in Britain, New Zealand, Palau and Australia. Her qualifications are from Canterbury University and Victoria University of Wellington. Pam is now academic librarian, arts and sciences at the University of New England, New South Wales, Australia. She has a background in reference service in public libraries, starting at the reference library of the London Borough of Croydon, and as the sciences librarian at Wellington City Libraries. Significant publications include: testing quality in library reference services; public use of the internet for health information; access to health information in hospital libraries. Her current areas of interest include: improving Pacific literacy outcomes, digital resources for Pacific school libraries and open source technologies for library management.

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Ms Schultz began her career as a secondary school teacher and then curriculum adviser with the Fiji Ministry of Education and then for twenty years taught nutrition at the University of the South Pacific until 1998. Between 1999 and 2004, she joined the Secretariat of the Pacific Community (SPC), Noumea, as lifestyle health adviser to 22 Pacific Island countries. In 2005, she became manager of the Pacific component (Fiji and Tonga) of the Obesity Prevention in Communities (OPIC) Research Project, a four country international collaborative

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Professor Emeritus Gillian Boulton-Lewis is an adjunct professor at the Queensland University of Technology. Her research interests are in learning and its implications for education across the lifespan. Her recent research is in moral development in early childhood, ageing and learning, and sustainable communities for seniors. She has published widely and involved with a large number of funded research projects.

Introduction: Bricolage, Bricoleurs and Purposeful Dialogue

Jeremy Dorovolomo

This book is informed by two paradigms, one being the Western notion of bricolage and the other being an indigenous terminology of *Talanga,* with its origins from Tonga in the Pacific Islands. Bricolage is a French word that was popularized by the anthropologist Claude Levi-Strauss in 1962 (Dezeuze, 2008). Bricolage is an activity that involves the fitting together of parts and pieces, a process of constructing objects from odds and ends (Dezeuze, 2008). It contains a complex interaction of components or artifacts assembled by the bricoleur (Dezeuze, 2008). This book is an assortment of papers and the diverse interaction of issues that presenters on the *Talanga*: The School of Education Seminar Series submitted. This seminar is organized by the lead editor, and upon writing, is at its 86th session since 2008. According to Vaka'uta (2009) "Talanga is a Tongan way of Talanoa (orality, story-telling, talking). Unlike Talanoa - which can be monological - talanga is a dialogical process that involves both the acts of speaking and listening, and they must always go together. Talanga requires no consensus. It is always an open-ended mode of conversation that invites multiple perspectives, options, solutions and/or meanings" (p. 128). It is hoped that the chapters that follow would offer multiple perspectives on Fiji and Pacific Islands' education, and create meaning. In addition to the Talanga the bricolage provides the framework for the book. Scribner (2005) states that a bricolage can be used to examine how teachers make sense of their problems of practice and encompasses the metaphor of teachers-as-bricoleurs. Scribner discusses that bricolage is a useful device to understand how teachers define and address problems of practice. Bricolage is the "art of creating with what is at hand" (Scribner, 2005, p. 297). The chapter authors are bricoleurs who use what he or she already has available, combined and arranged with the "hope that one day they will be useful" (Scribner, 2005, p. 297). The work of bricoleurs are never identical, get surprisingly practical results from the most unlikely material, take a pragmatic orientation, and learn to operate in the environment that they are presented with (Scribner, 2005).

In other words, bricolage is work done by people who can see with different eyes and utilize what exists (Nader, 2004). This book is a compilation of what bricoleurs view with their different eyes on education issues in Fiji and the Pacific Islands. Yardley (2008) considers researchers as bricoleurs, who are makers of patchwork and weavers of stories, and stimulate inclusive, dynamic dialogue between the researcher and a receptive audience. The editors are utilizing existing works of contributors to compile a book. Therefore, this concept reflects the ingenuity displayed by teachers on a regular basis having to work with limited budgets and supplies. The ability to cope, and even thrive in situations where resources need to be maximized, is what teachers are often proficient at performing. The notions of the bricolage where something is created out of available resources, and which often depicts customizing, improvising, substituting, and being inventive, should not be seen as involving lower levels of thinking. Reynolds (1999) reinforced that the bricolage, the concept of making do with what is available, "evokes higher level thinking skills required at all levels of education" (p. 10). It involves higher level thinking because it requires problem solving and reasoned behavior on the part of the bricoleur to satisfactorily complete a project at hand (Tadajewski & Wagner-Tsukamoto, 2006). Innes and Booher (1999) add to the discussion that the bricoleur has a heterogenous but finite store of materials and tools to create a unique product. This book has a variety of materials and tools, but it is also bound around educational issues. Thus, despite being customized and improvised, the chapters of this book are also focused and involve important high level thinking and analysis of Pacific Island educational issues. These educational discussions are imperative for other bricoleurs and practitioners, and policy makers. "The bricoleur is like the player in the fantasy game, who picks up the letter opener because it might be useful. Those of us who gather up policy ideas, concepts, and practices over time, to bring to bear in policy making, are also like bricoleurs" (Innes & Booher, 1999, p. 15). It is envisaged that the interactive exploration that bricoleurs, who contributed to the chapters, would transform one another to help create choices and help find solutions to education challenges.

Bricolage is a form of reasoning that is different from science where the end product decides what means should be used. In bricolage, the end product is decided by the manner in which the materials at hand are put together (Innes & Booher, 1999). Consequently, in policy making, for example, there is no one best way but a diversity of available concepts and policy ideas gathered into a coherent and workable strategy. This is so because bricolage is a "nonlinear, holistic attack on a problem that results in some practical product. The design of that product is not grounded in positivist, predictive theory, but rather in a combination of practical and aesthetic sensibilities" (Innes & Booher, 1999, p. 16). This book intends to be a practical product achieved through collective bricolage that would help devise actions that will improve educational practice. Users can shift pieces, try certain pieces, and utilize them in some focused manner. The specific discussions in this book may not fit neatly together nor neatly differ. The chapters fit into the scheme of the bricoleurs' heterogenous materials and opinions.

It is noteworthy to reiterate that teachers themselves are bricoleurs (Hanley, 2011; Honan, 2004), who construct meaningful assemblages of classroom

practices and formulate rigorous personal theories to govern those practices from varying sources. Teachers always use a variety of approaches to make sense of the syllabus. As bricoleurs, "they take various parts of the syllabus texts and adapt them, through blending with existing practices and other texts available to them, to produce meaningful changes to their classroom practices" (Honan, 2004, p. 101). Hutchinson (2011) also states bricolage at play in teacher education when student teachers are attached to schools. Student teachers plan and teach largely using a process of creative use of resources and re-assembling ideas, activities and ways of thinking. Hutchinson emphasized that teacher educators essentially recognize that transfer of knowledge from one setting to another. Thus, it is important for student teachers to draw together ideas developed in different settings in ways that are richly creative and produce a collective experience. Teacher educators gather, adapt, and re-mix resources with a desire to inspire pupil engagement (Hutchinson, 2011).

In addition, learning can be seen as bricolage itself (Freeman, 2007), as learning involves piecing together what students know from varying sources in different ways. In addition, Barton, Tan, and Rivet (2008) emphasized that there is the notion of cultural bricolage, where students learn by confronting differences and producing new and hybrid knowledge and identities. Students put together sanctioned and unsanctioned resources and identities in novel ways to help transform their learning. Hanley (2011) noted that bricoleurs need to also collaborate with other departments, disciplines and affiliated colleagues, since each one's practice is local and different and can learn from each other. This is particularly important because the world is messier than people suggest (Fenwick & Edwards, 2011) enmeshed in an ongoing bricolage of enunciations, negotiations, resistances and reconfigurations of policies and practices. The world is messier, requiring bricoleurs to collaborate to pragmatically piece together existing stocks of instruments in new ways.

References

Barton, A. C., Tan, E. & Rivet, A. (2008). Creating hybrid spaces for engaging school science among middle school girls. *American Educational Research Journal, 45*(1), 68-103.

Dezeuze, A. (2008). Assemblage, bricolage, and the practice of everyday life. *Art Journal, 67*(1), 31-37.

Fenwick, T. & Edwards, R. (2011). Considering materiality in educational policy: Messy objects and multiple reals. *Educational Theory, 61*(6), 709-726.

Freeman, R. (2007). Epistemological bricolage: How practitioners make sense of learning. *Administration and society, 39*(4), 476-496.

Hanley, L (2011). Mashing up the institution: Teacher as bricoleur. *Radical Teacher, 90*(1), 9-14.

Honan, E. (2005). Teachers as bricoleurs: Producing plausible readings of curriculum documents. *English Teaching: Practice and Critique, 3*(2), 99-112.

Hutchinson, S. A. (2011). Boundaries and bricolage: Examining the roles of universities and schools in student teacher learning. *European Journal of Teacher Education, 34*(2), 177-191.

Innes, J. E. & Booher, D. E. (1999). Consensus building as role playing and bricolage. *Journal of the American Planning Association, 65*(1), 9-26.

Nader, L. (2004). The harder path – Shifting gears. *Anthropological Quarterly, 77*(4), 771-791.

Reynolds, K. (1999). Bricolage in the classroom. *Science Scope, 22*(4), 10.

Scribner, J. P. (2005). The problems of practice: Bricolage as a metaphor for teachers' work and learning. *Alberta Journal of Educational Research, 51*(4), 295-310.

Tadajewski, M. & Wagner-Tsukamoto, S. (2006). Anthropology and consumer research: Qualitative insights into green consumer behavior. *Qualitative Market Research, 9*(1), 8-25.

Vaka'uta, N. (2009). Talanga: Theorizing a Tongan mode of interpretation. *Alternative, 5*(1), 126-139.

Yardley, A. (2008). Piecing together- A methodological bricolage. *Forum: Qualitative Social Research, 9*(2), 31-43.

Part I: School Curriculum and its Environment

Chapter 1: Education for Being: A Possible Path for a Better Future for All

Govinda Ishwar Lingam

Introduction

This chapter argues that "education for being" through the learning and teaching of values can contribute to the promotion of cultures of peace and nation building. With the current escalating rate of change at all levels of life that is apparently inherent in modernization and globalization, the world has witnessed an increasing number of conflicts and violence in most parts of the globe; the Pacific region has been no exception. A cause for this situation could be the heavy emphasis, in all education systems, on the *having* mode of education. In this regard, the paper advocates the reorientation and strengthening of the school curriculum so that equal emphasis is also placed on the *being* mode of education, focusing on learning and teaching of values. The reclamation of and emphasis on values education in all aspects of learning and living is advocated as a necessary step forward in the direction of creating peace and harmony at all levels of life in pluralistic societies.

Manifold change through the forces of globalization has now become a fact of life for people the world over; even people in remotest areas cannot escape at least some of its effects. All spheres of life and work undergo many transformations in contemporary times with great rapidity. Information communications technology (ICT), cultural productions and climate change are some of the glaring ones having varying impacts on the lives of people in all corners of the world (Urry, 2002). Some of these changes are beneficial whereas others, such as the proliferation of nuclear arms and the flood of porno-violence that surrounds us with depictions of violent and dehumanizing acts, are detrimental to human beings (Huggins & Kester, 2008; Robinson, 2003; Toh, 2009). Socialization, mass media, movies and internet are some of the powerful influences that continually bombard people, effecting positive and negative changes in people's lives. In the process of negative change, people tend to lose sight of what is good for humanity. Such negative changes do not augur well for the shaping of human characteristics and qualities. Undesirable changes lead to the development of crises of all sorts and subsequently, many people go through pain and suffering in the face of the dehumanized and dehumanizing attitudes and

behaviour of other peoples. However, if peoples of diverse cultures and traditions are to live together peacefully, then definitely some useful educational strategies and interventions such as emphasis on the *being* mode of education can contribute positively towards building lasting peaceful co-existence of all communities and societies (Delors, 1996; Jarvis, 1992; Marcel, 1976; Subramani, 1989; Toh, 2001).

This paper, firstly, provides some commentaries derived from both local and international literature relating to escalating problems affecting humanity. The paper then discusses how education in the *being* mode has great potential to bring about positive transformations in people's perceptions, thereby contributing towards a sustainable and peaceful co-existence of pluralistic societies. Finally, the paper offers some suggestions on the use of an integrated approach as a suitable school-wide strategy towards effectively building peace and harmony at all levels of life in pluralistic societies.

Background Literature

What kind of future would we like to live in? How can we build that future? These two questions are important enough to warrant reflection and serious rethought from everyone about where to from here. With reference to education, Campbell and Baikaloff (2006) characterize the school curriculum as ultimately determining the kind of future we would like to build for ourselves. For instance, if we want mathematicians, then we should have in place a good mathematics curriculum that can produce mathematicians with suitable knowledge and skills. In the same vein, if we want well-rounded people, then we must incorporate various aspects of education for *being* into the school curriculum and at the same time emphasize it. As human beings, we would genuinely like a good future for ourselves and for our children; as such, we must put in place a curriculum that fosters peaceful personal behaviours and choices. No human being, for that matter, would choose to go through any kind of pain and suffering. However, in recent decades the world has witnessed calamities of all types, including the 9/11 disaster, global warming, nuclear threats, civil wars and even small 'wars' such as physical violence in schools and violence against women and children (Huggins & Kester, 2008). It is as though knowledge and technology deliver to pre-conceived opinions, stereotypes and prejudices the means to express negativity about others through aggression and conflicts and in doing so inflict pain on others. This is an example of threat to human existence. Instead of engaging in constructive talk and dialogue, people resort to fighting to resolve tensions and conflicts. In the process many innocent lives are severely affected.

Furthermore, in the real world that people have created, however, people who have amassed possessions such as properties and wealth tend to be accorded or to arrogate to themselves high status in society. The rightness of this view of life has become deeply ingrained in human lives. In contemporary societies, capitalist economics and material wealth and goods are emphasized and lauded. In the process of globalization "not everyone has an equal stake in the success of the new economic order" and inequities persist between and within nations (Ball, 1998, p. 120). Thus, not everyone benefits equally and this leads to growing gaps between the rich and poor and if the trend continues the future is likely to get

worse for all. This world view is supported by the sort of education that promotes the lower-level needs and not the higher-level needs of human existence (Maslow, 1968).This sort of education could be a contributing factor towards reproduction and legitimation of a society that is entrenched in inequalities in many dimensions of life such as along ethnic and religious lines. Saying this is in no way a total rejection of education based on the *having* needs of human existence. Indeed, such education is vital for human survival and continuity. But now it appears that the *having* need is overemphasized at the expense of the *being* need which to a large extent appears to be neglected.

In light of the undesirable developments in contemporary societies, education on the *being* mode deserves greater or equal attention now than ever before. Erich Fromm (1981 cited in Jarvis, 1992: 143) lucidly explains the difference between the *having* and *being* modes of human existence:

> In the *having* mode of existence my relationship to the world is one of possessing and owning, one in which I want to make everybody and everything, including myself, my property…In the being mode of existence, we must identify two forms of being. One is in contrast to having … and means aliveness and authentic relatedness to the world. The other form of being is in contrast to appearing and refers to the true nature, the true reality of a person or a thing in contrast to deceptive appearances.

This explanation easily leads to the deduction that human life can be threatened if education based on the *having* mode of society continues to receive a heavy emphasis and recognition; certainly, it will, at the very least, lead to lopsided personal development. Such a personal development may be a contributing factor towards undesirable actions of people.

For example, in the Fiji schools, there is a heavy emphasis on academic education (Fiji Islands Education Commission, 2000; Muralidhar, 1994: UNESCO, 1992). This heavy emphasis on the *having* mode of education that is, learning content knowledge within the school curriculum is a cause of grave concern. Muralidhar (1994) has aptly pointed out the dangers of overemphasing the academic education, [it] "may help us to compete more effectively in the job market, [but] it does not feed the human spirit, it does not make us whole individuals" (p. 79). Likewise, Smyth (2001) characterizes this type of education as an 'enterprise culture' and "deflecting attention away from social issues in schooling" (p. 125). Continuation of the application of educational curricula with a strong emphasis on *having* mode will surely lead to lopsided development of individuals. In view of the undesirable things happening around us, revisiting our school curricula would be a worthwhile undertaking. In doing so incorporation and at the same time promotion of higher-levels of human existence should receive due recognition, that is, the *being* mode of education. As far back as the 1960s, Peters (1965) expressed similar sentiments about education providing "touch of eternity under which endurance can pass into dignified, wry acceptance, and animal enjoyment into a quality of living" (p. 110). It is through a process of reconceptualising the curriculum that we can help achieve what Peters says and correct these imbalances in the school curriculum that is, between the *having* and

the *being* modes of education. This education will then have the potential to provide better enrichment to all dimensions of human life as it will contribute significantly to a more holistic education and an education that matters.

Dramatic increases in the world today in social problems such as juvenile delinquency, government corruption, white collar crime, civil wars and a host of others are contributing towards the weakening of social institutions for looking after its members (Cummings, 2001). For instance, in our local context, the daily newspapers highlight not only cases of corruption but also other forms of crime such as robbery with violence, rape, discrimination against women, domestic violence and drug abuse. An increasing rate of drug and substance use and abuse among school children is of major concern to all key stakeholders in education and in particular, to teachers and parents (Lingam, 2004). The use of volatile substances by school children was widely publicized in the newspapers when glue-sniffing was found to be a popular and growing practice in schools. The effects of abuse of substances like glue, petrol, marijuana and other illicit drugs and substances, not to mention the 'legal' ones like tobacco and alcohol, are harmful and can have far reaching effects on an individual's life. All these may be happening because of the lack, both at home and at school, of education in the *being* mode.

Also, in most contexts in the contemporary world, ethnic conflicts are becoming a common sight. All too often the human commonalities are lost sight of against personal aggrandizement. These common features and similarities should in fact be used as a means of enrichment of different people's cultures, religions, traditions and ethnicity—the intricate tapestry of human life. As former UN Secretary-General Kofi Annan (n.d) has pointed out, "We live in a world of great diversity, but a diversity based on shared values of tolerance and freedom; a world which is defined by its tolerance of dissent, its celebration of cultural diversity, its insistence on fundamental, universal human rights, and its belief in the right of people everywhere to have a say in how they are governed". Towards this end, people need to transform their own world views by integrating other perspectives into their own ways of thinking, to avoid any undesirable clashes. But schools as an important agent continue to place a heavy, almost crushing, emphasis on children's academic achievement and acquiring of credentials.

Furthermore, Kofi Annan (n. d) stated that "a pluralistic view of human identity helps to illustrate how universality and particularity coexist at all times. Every person or social group reflects a multiplicity of traditions and cultures. For this reason, all individuals differ in some respects, but in other regards have much in common". If people realize that there are numerous common elements in all cultures then this could be effectively used to promote unity in diversity. After all, only one species out of fifty billion has evolved to the human form. Considering this, the promotion of unity in diversity and other suitable values such as caring, sharing, sustainability and justice will not be a difficult task but one that could be easily achievable. The encouragement and promotion of such core human values has enormous potential to help prevent fractured relationships, reducing misunderstandings and mistrust amongst the different communities that exist in all jurisdictions. Not only will it help people of different cultures and traditions to live together but also it has the scope and potential to reduce present and future economic, social and political problems. These insidious challenges

breed cultures of conflict, war and violence and further fragment and divide people. Preferably such a constructive intervention as emphasis on the *being* mode of education should start formally at the pre-school level as it has the potential to bring about positive transformations in people's lives for the good of all humankind (Johannson, 2006). As aptly stated by a well-known Buddhist teacher, Thich Nat Hanh, that we are never just 'being' but always 'inter-being' (Toh, 2001). In light of this metaphor, a sound understanding of the multiple dimensions of people together with establishing suitable interpersonal and social relationships would be a positive way of building a culture of peace in all societies and nations.

Reorient School Curriculum: Emphasis on the Being Mode

The problems mentioned in the previous section, clearly discerned towards the end of the last century, prompted the redefinition of the philosophy of education "so that it focuses on the primacy of the human individual" (UNESCO, 1993: 4). In this regard, UNESCO has played a crucial role since the historic 1974 Recommendation concerning Education for International Understanding, Co-operation and Peace relating to Human Rights and Fundamental Freedoms adopted at its 18th General Conference. There have also been other UNESCO-led declarations, including the 1995 Declaration and Integrated Framework of Action on Education for Peace, Human Rights and Democracy as well as the United Nations decades like the International Decade for Culture of Peace and Nonviolence for the Children of (2001–2010). All these actions clearly illustrate the advocacy for building a culture of peace in all spheres of life, including local and global levels.

Education can still play a very important role in addressing some of the issues confronting our communities provided we emphasize the *being* mode of education. Generally speaking, at the moment education systems overstress hierarchical, over-competitive and examination-centred structures and methodologies. This type of education may be a contributing factor to most of the divisions in the society as well as creations of unequal economic, social and political structures (Toh, 2004). Instead education should help humanize social, economic and political structures. As Naidu (2003:1) noted, "a significant force in nation building is a country's educational system". To be exact, it is the school curriculum that has a bearing on the type of future we would like to have for our children (Campbell & Baikaloff, 2006). Apart from the curriculum and the teachers, we all can work together towards achieving this ambitious but achievable goal in the long-term. School curricula should also emphasize appropriate skills, such as skills to determine how one's actions affect other people and their feelings, the ability to recognize and appreciate both the similarities and the differences in other cultures, and to analyse how other viewpoints or ways of living contribute to solving conflicts, inequities and other local, regional and international problems. As mentioned earlier, the foundation for awareness on these matters is best laid when children are in their formative stage of development (Johannson, 2006). This is because what a child learns from his childhood days shapes his/her future.

One of the components of the *being* mode of education which is universal in application and could be effectively taught in schools and beyond is values education. Through values education we can achieve goals such as healthy and just democracy, productive economy and sustainable development (White, 2004).The concept of values is not easy to define. Generally, people tend to confuse values with beliefs, knowledge, attitudes and skills. Lemin, Potts, and Welsford (1994, p. 1) describe values in the following way, "Values are determined by beliefs we hold. They are ideas about what someone or a group thinks is important in life and they play a very important part in life and they play an important part in our decision-making. We express our values in the way we think and act". In fact a value is something that is worthwhile not only to an individual but to all people. Thus, status is given to values and also the meaning values provide to people in their day to day life.

Due to increase in problems affecting people world over, there has been a resurgence of interest in education on the *being* mode, such as character education, values education and citizenship education in schools. Values education programmes are implemented in many schools in overseas countries for the purpose of building a better future for all. Examples include, in the New South Wales context, the production of a Department of Education and Training document entitled *The Values We Teach*; the moral and character education in American Blue Ribbon school (Murphy, 1998); the Miracle School in Gambia; the ethics and moral education in Korea (Byun et al., 1985); and other initiatives in a number of other countries including the Asia–Pacific region. With reference to the goals of Japanese schools, Shimahara and Sakai (1995) highlight phrases such as 'creating children with generous hearts', which they note are quite common. For further examples, in the United States, the Georgia Board of Education formulated and implemented character education based on the teaching of thirty-seven core values (Heslep, 1995). In the same vein, the Virginia Department of Education designed and implemented the moral education program (Heslep, 1995). In other contexts, such as Asia and some parts of the Pacific, values education was revived to contribute towards peace building due to calamities of all sorts (Cummings, Gopinathan, & Tomoda, 1988).

As far back as the 1990s the Government of Fiji (1993) recognised the need for schools to teach values education in schools. The concern for this was based on the lack of suitable values amongst the school children. As such, apart from teaching intellectual skills for the purpose of academic achievement, schools are now required to teach values:

> There is increasing concern that students require better citizenship training in schools than is currently available. It would appear that the emphasis placed on intellectual and academic achievements in schools has not been matched by sufficient emphasis on the development of human and moral values. The Ministry is considering ways in which values education and citizenship training can be improved in schools (Government of Fiji, 1993).

Thus, in view of the rapid decline in children's values, the Ministry of Education considered it worthwhile to develop a values education programme for use in

schools. The programme was introduced in both primary and secondary schools in 1996 and the teachers were explicitly required to teach the programme. Without any proper training, however, it is not possible for teachers to be fully effective in teaching the programme. It is envisaged that a good values education programme will contribute towards all-round development of a child. The Ministry's vision is of "educating the child holistically for a peaceful and prosperous Fiji" with emphasis on these values: cultural understanding, empathy and tolerance; human rights, human dignity and responsibility; safety and security for all; honesty, fairness and respect for truth and justice; civic pride; integrity; environmental sustainability; peace and prosperity; flexibility; life-long education; compassion; sense of family and community; faith; and creativity.

The Fiji Government's recent document (2008) the *People's Charter for Change, Peace and Progress*, outlines the values thought appropriate for the people of Fiji to uphold for a better Fiji for all, today and in future. These values also need to be given due attention in all schools, so that children develop values beyond those positions based only on narrow communal considerations. Apart from human values, it is good to see that the Government of Fiji wishes also to teach children the values involved in maintaining and restoring nature and the natural environment. The inclusion of values relating to the environment is timely. The degree of ecological and social destruction we have already inflicted on our habitat is indicative of the importance of teaching about our dependence on the environment and the need to live in it with an appreciative eye to the sustainability of our use of it (Huggins & Kester, 2008).

The values emphasized transcend all boundaries—geographical, religious and ethnic; their teaching would be appropriate towards building peaceful co-existence of Fiji's pluralistic society and for individual, national and global well-being. Apart from UNESCO, other organizations such as the Asia Pacific Network for International Education and Values Education (APINEV) and Sathya Sai Organization are working assiduously to promote universally shared values. The values these organizations promote and their adoption and integration in people's lives would be a giant step in the right direction for all people to lead a good life. But unfortunately, the status given to values education in schools is thus far minimal and superficial.

Apart from the central authority, other agencies and institutions such as the family, religious organizations and the community expect teachers to hold desirable values, as people have high regard for teachers, especially in the small islands states of the Pacific, where they are generally looked up to as a major and reliable source of knowledge. Thus, for the good of the profession, values education must also be taught to teachers, as something they live, not just something they teach about, so that they take a professional approach to their day-to-day work at school with children, colleagues and other agencies. The teaching and learning of values could contribute enormously towards securing a better life and peaceful living for all citizens. However, to translate this vision into reality, professional preparation of teachers is a vital part of the equation, as suggested in the literature (Davies, Gregory, & Riley, 1999).

Teacher Preparation

Teachers in all corners of the earth are the frontline workers in the field of education who can make a difference in the lives of the people. Parents and other stakeholders place on them the responsibility of preparing our children for the future. In this regard, it is always fitting to recognize the important work they carry out for the good of all. For better delivery of service they need to be well prepared and supported in their work by all. Unless they are well prepared for values education or for teaching any subject, it is likely to fail.

One of the constraints to implementing activities relating to the *being* mode of education is the lack of pedagogical knowledge and skills of teachers (APCEIU, 2008). As a result the most common pedagogy employed by the teachers is the 'banking' approach which does not augur well with values teaching and learning. The teaching and learning of values is different from the traditional teaching of subject matter knowledge. In fact, the teaching and learning of values is more difficult. Training of teachers will surely enable them to teach innovatively and create better learning and teaching atmosphere in the classroom. With suitable pedagogical skills, teachers are likely to integrate important aspects of education on the *being* mode in the curriculum and effectively teach them**.** The use of strategies such as observation, recognition, discussion, situational analysis and critical thinking are considered suitable for effective teaching and learning of values. They could then better translate values into practical classroom experiences. The crucial role of teachers in educating children to create positive societal transformation is considered more important now than any other time in history (Fien, 2003; Huggins & Kester, 2008). However, without any professional preparation their capacity will be limited in using suitable pedagogical principles of teaching and learning in values education.

Due to the resurgence of values education in schools, values education is taking a pivotal role in teacher preparation programmes and also in the agendas of international organisations. This is a positive move as it will allow teachers, teacher educators and educational leaders to be critically aware of values and their place in a holistic education and to use a balanced approach to teaching and learning of values. In recognising the critical role played by teachers in the field of education for enhancing the promotion of the *being* mode of education, the Asia-Pacific Centre of Education for International Understanding (APCEIU) has been organising and conducting training programmes for teachers and other educational workers since 2001. These training programmes are conducted in Korea UNESCO Peace Centre in Incheon. APCEIU is continuing its worthy commitment in capacity-building in the Asia-Pacific region. The author attended the 9th Asia-Pacific Training Workshop organised for teacher educators in the region which covered issues such as intercultural understanding, human rights, peace, and culture of non-violence. This was a useful training programme as it provided teacher educators better and broader perspectives, relevant knowledge and skills to develop their capacity to design and implement training programmes on varying issues relating to the *being* mode of education in their contexts. Likewise, the School of Education at the University of the South Pacific initiated a course on Values in Education which consisted of 7 units: what are values, values at school, school ethos, curriculum and learning values, assessment of

values, and learning for living. Basically, the course was designed to prepare teachers professionally for the teaching of values education in schools (Lingam, 2004). The course aimed to help teachers improve their inner self so that they demonstrate suitable values themselves in their personal and professional lives before they try to teach values in order to positively transform others. It also aimed to equip teachers with appropriate pedagogical practices so that they can effectively teach and nourish suitable values formation in the children. Apart from teaching, the course expected to provide teachers with opportunities to design and organize cultural events such as festivals, as these events can help provide increased exposure to and enhanced knowledge of different cultural and religious value systems. Moreover, as part of teachers extended professional responsibilities, they could reach out to communities for the purpose of creating awareness on varying aspects relating to the *being* mode of education in the communities served by the schools. A substantive partnership with other stakeholders such as religious leaders can yield greater benefits to all. Also, teachers could involve the parents and other stakeholders in values education especially when sharing and agreeing on desirable values that need to be taught and learnt in schools. This would demonstrate that not only the school but the school's immediate community and beyond could play a role in values education. Education for being, such as in the teaching and learning of values like mutual understanding, tolerance, respect and love, are some of the universal values that need to be encouraged and promoted in all communities. After all, we are humanity evolving from the same root despite the different routes we have taken to reach different parts of the world.

Integrated Approach of Delivery

Education on the *being* mode, such as values education, cannot be assigned a 30-minute time slot in the master timetable and taught accordingly. The nature of values education is such as that it merits emphasis throughout the day. Bearing in mind, too, the expansion of school curricula, the tradition of allocating certain fixed amounts of time for teaching may not be possible in future. Rather, when teaching any subject, suitable values can be identified and embedded in the lessons and taught. In some cases, certain values can be taught in more than one area of the school curriculum. For instance, the concept of equity (in which justice and fair play are important values) can be taught such as in mathematics, social studies, literature and even in co-curricular areas. This approach depends on the ingenuity of the teachers in identifying the values ingrained in the school curriculum and teaching them. Even when children are engaged in co-curricular activities, suitable values can be incorporated and taught accordingly. In doing so, that is, by teaching values across the curriculum, we demonstrate that values should not become compartmentalized along subject lines (Burnett & Velayutham, 2008). Teaching values across the curriculum will show the inter-connections and interrelationships among them whilst at the same time illustrate how values permeate in real life situations. An integrated approach is a preferred way to teach values and this will require teachers to possess certain competencies and positive attitudes. The adoption of an integrated approach will make ample opportunities available to reinforce desirable values across the curriculum and at

the same time give to the teaching and learning of values the importance and emphasis that it rightly deserves.

Concluding Reflection

To make a significant difference in the lives of future generations and to shape a more values-oriented globalisation, schools should take a leading role in teaching and promoting education on the *being* mode, rather than assuming that children will learn and acquire suitable values as they go through in life. In addition, a substantive partnership with other agencies can help teachers reach better decisions on the agreed values that need to be taught and learned. As professionals in the school, teachers can mediate the world and screen out undesirable influences to better prepare children for life and work, by shaping their emotional and intellectual development in the ethos of 'good values'. Through the effective teaching and learning of values teachers can positively transform both the learners and the society as a whole. This may appear to be an ambitious and idealistic goal, but it is one that is achievable through shared responsibility. One thing is sure: if we are not proactive about monitoring and guiding the values children absorb, they will find a host of other values streamed at them from social life and the media; abhorrent as this may be, values absorption will happen anyway. This is a high price to pay for sitting back and allowing things to take their course. Education for *being*, such as through values education, is an essential long-term investment in sustainable and peaceful co-existence of plural societies world over.

References

Annan, K. (n.d). Dialogue of civilizations: Finding common approaches to promoting peace and human development. Available at http://archive.unu.edu/dialogue/FrameworkForAction.pdf

Asia-Pacific Centre of Education for International Understanding (APCEIU). (2008). *Situational Analysis on education for international understanding in the Asia-Pacific region.* Seoul: APCEIU.

Ball, S. J. (1998). Big policies/Small world: An introduction to international perspectives in education policy. *Comparative Education*, 3(2), 119-130.

Byun, H. K., Bae, C. K., Paik, Y. D. Chung, T. B. (1985). Interface between education and the state policy: Redesigning teacher education policies in the context of a preferable future in education.

Burnett, G. & Velayutham, T. (2008). The curriculum: Values embedded in what and how we teach. In *ED334 Values in Education Course Book* (pp. 4.1–4.19). Suva: The University of the South Pacific.

Campbell, J. & Baikaloff, N. (2006). Transnational visions of desirable futures. In J. Campbell; N. Baikaloff & C. Power (eds.). *Towards a global community: Educating for tomorrow's world: global strategic directions for the Asia-Pacific region* (pp. 13–68). Netherlands: Springer.

Chomsky, N. (2003). *Hegemony or Survival*. New York. Pergamon

Cummings, W. K. (2001). The future of values education in the Pacific Basin. In C. Williams, T. Maria & H. John (eds.). *Values Education for Dynamic Societies: Individualism or Collectivism* (pp. 285–298). The University of Hong Kong: Comparative Education Research Centre.

Cummings, W. K., Gopinathan, S. & Tomoda Y. (eds.) (1988). *The Revival of Values Education in Asia and the West*. New York: Pergamon.

Davies, I., Gregory, I. & Riley, S. C. (1999). *Good citizenship and educational provision*. London: Falmer Press.

Delors , J. (ed.). (1996). *Learning: The treasure within: Highlights from the Report to UNESCO of the International Commission on Education for the 21st Century*. Paris UNESCO Publishing

Fien, J. (2003). Learning to care: Education and compassion. *Australian Journal of Environmental Education, 19*, 3–17.

Fiji Government. (2008). Fiji: The state of the nation and the economy. Suva: Government Printer.

Fiji Islands Education Commission (2000). *Learning together: Directions for education in Fiji islands*. Suva, Fiji: Government Printer.

Heslep. R. D. (1995). *Moral Education for Americans*. Westport, CT: Praeger.

Huggins, K. & Kester, K. (2008). The earth charter: Peace education and values for a shared world. *In Factis Pax, 2*(1), 30–68.

Jarvis, P. (1992). Being and having. In P. Jarvis (ed.). *Paradoxes of learning* (pp. 143-154). San Francisco: Jossey Bass.

Jarvis, P. (2003). Being and having. In P. Jarvis & C. Griffin (eds.). *Adult and continuing education: Major themes in education, Vol 5* (pp143-154).London: Routledge

Johansson, E. (2006). Children's morality: Perspectives and research. In B. Spodek & O. N. Sararcho (eds.). *Handbook of research on education of young children* (pp. 55-83). New Jersey: Lawrence Erlbaum

Lingam,G. I. (2004). Values education: A new development in teacher education. *Pacific Curriculum Network* 13(1&2), 6–9.

Lemin, M., Potts, H & Welsford, P. (1994). *Values strategies for classroom teachers*. Hawthorn, Victoria: ACER.

Marcel, G. (1976). *Being and having*. Gloucester, MA: Peter Smith.

Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.) New York: Van Nostrand Reinhold.

Murphy, M. M. (1998). *Character education in America's Blue Ribbon Schools: Best practices for meeting the challenge*. Lancaster, Pennsylvania: Technomic Publishing.

Muralidhar, S. (1994). Reforms in schooling: Problems and Challenges. *Journal of Educational Studies, 16*(2), 75–83.

Naidu, V. (2003). Education for nation-building. Paper presented at the Regional Conference on Rethinking Educational Aid. 20–22 October 2003 at Mocambo Hotel, Nadi, Fiji.

Peters, R. S. (1965). Education as iniation. In R. D. Archambault (ed.). *Philosophical analysis and education* (pp. 99-103). London: Routledge.

Ritzer, G. (1998). The macdonaldization thesis: Explorations and extensions. London: Sage.

Robie, D. (2011). Conflict reporting in the South Pacific: why peace journalism has a chance. *The Journal of Pacific Studies*, 31(2), 221-240

Robinson, M. (2003). Globalization and human rights. Paper presented at the 21st Century Trust seminar on Globalization: rhetoric, reality, and international politics. Congress, Washington DC, 31 October 2003.

Shimahara, K. & Sakai, A. (1995). *Learning to Teach in Two Cultures*. New York: Garland Publishing.

Smyth, J. (2001). *Critical politics of teachers' work: An Australian perspective*. New York: Peter Lang.

Subramani. (1989). Education for a pluralistic world. *Directions: Journal of Educational Studies*, 11(1), 19-26.

Thaman, K. H. (1993). Culture and curriculum in the South Pacific. *Comparative Education*, 29(3), 249-260.

Toh, S. H. (2009). Education for international understanding; A holistic framework. Paper presented at the 9th Asia-Pacific Training Workshop on EIU Learning to live together in the 21st Century. 4-13 September in Seoul & Incheon, Republic of Korea.

Toh, S. H. (2004). Education for international understanding toward a culture of peace: A conceptual framework. In V. F. Cawagas (ed.). *Learning to live together: A teachers resource book in education for international understanding* (pp. 13-31). Seoul: Asia Pacific Centre of Education for International Understanding,

Toh, S. H. (2001). Education for international understanding: Toward a culture of peace. *SANGSAENG*, Autum 2001, 8-12.

UNESCO (1992). *Education for affective development*. Bangkok: UNESCO Principal Regional Office for Asia and the Pacific.

Urry, J. (2002). Mobility and proximity. *Sociology* 36(2), 255–274.

White, J. (2004). *Rethinking the school curriculum: Values, aims and purposes.* London: Routledge

Chapter 2: Multi-class Teaching: Is it a Satisfactory Arrangement for Quality Rural Education?

Govinda Ishwar Lingam

Introduction

This chapter focuses on multi-class teaching. Specifically, it highlights an important issue, namely, teacher professional preparation for multi-class teaching. The lack or absence of professional development of those teachers working in multi-class contexts appears to be an impediment to rural children's learning outcomes. A review of international literature is undertaken to better provide insights about interventions employed to strengthen multi-class teaching. These ideas could then be taken on board by developing countries, such as Fiji and other Pacific Island states, as a way forward in providing quality learning and teaching in situations with multi-class arrangements. This chapter concludes with some suggestions for stakeholders to consider, especially the principal stakeholder on the issue of multi-class teaching and how educational services of the best quality can be provided to children in such contexts.

Literature

Multi-class teaching refers to the teaching of two or more classes in one classroom by one teacher. It is also referred to as combination classes, split class teaching, multi-level teaching, or multi-grade teaching (Collingwood, 1991; Quist, 2005). Broadly speaking, the notion that every class is a multi-class is true. Therefore, a straight class is also a multi-class because children of different ages, interests, needs and abilities are found in straight classes too. Teachers then have to plan and conduct teaching and learning so that they cater for all children. However, in a multi-class situation the variations in terms of children's abilities and age are far much greater than in a straight class situation and this makes the work of teachers more complicated and demanding (Ali, 2004; Cornish, 2006; Lingam, 2007).

Multi-class teaching varies from context to context. Cornish (2006) cautions that there are contextual differences to multi-class teaching and knowing the contextual realities is valuable in having better understanding about multi-class teaching situations. In this regard, a study of multi-class situation in one context cannot be generalized to a multi-class situation in other contexts unless the contextual differences are at a minimum level. For example, multi-class situations in Fiji could differ markedly from those in Mexico, Bhutan or the African countries. In light of this view, most examples cited in this paper on multi-class teaching are drawn from the Fiji case.

Schools with multi-class teaching are found not only in rural parts the Pacific Island states but also in many different countries world over. For example,

- Finland: where 70% of all primary pupils are enrolled in schools with fewer than three teachers
- Portugal: where 80% of pupils attend schools with no more than two classrooms
- The Philippines: Where 8% of schools are multi-grade
- Mexico: where 22 % of primary schools have only one teacher
- India: where 77% of primary schools follow multi-grade system
- Ireland: where 42% of schools have two or more grade levels and 16% have three or more in a class
  (Quist, 2005: 4)

The only statistics available for multi-class teaching for the Pacific Island states dates back to the 1990s and multi-class teaching involved:

- 25 % of primary schools in the Solomon Islands
- 60 % of primary teachers, 50 % of children in Kiribati
- 8 out of 9 primary schools in Tuvalu
- 60% of teachers, involving 67 out of the 74 primary schools in the Marshall Islands
- 50 % of primary schools in the Cook Islands
- 10 % of teachers, 8 % of children in Western Samoa
- 28 % of primary school children in Vanuatu
  (Collingwood, 1991: 12)

Like the statistics for the Pacific Island states, the latest statistics available for multi-class in Fiji is for the early 1990s. The statistics show that 50 per cent of all primary schools; 25 per cent of teachers and 28 per cent of the nation's children were involved in multi-class teaching (Collingwood, 1991, p. 12). Even though, the statistics provided is quite old it gives some indication about multi-class teaching for some of the Pacific Island states, including Fiji. The statistics shows a high prevalence of multi-class teaching in almost all the countries in the Pacific region. A large number of teachers and children are involved in this kind of teaching arrangement.

As mentioned earlier, multi-class teaching arrangements are common in rural settings where the population is low and there are not many school-going age children and as such schools are expected to combine classes and teach

(Collingwood, 1991; Hargreaves et. al., 2001, Lingam, 2007). In most cases, infrastructure and other essential services are poor in rural areas which further adversely impact children's education (Menon & Rao, 2006). In what follows are illustrations drawn from the Fiji case of the kind of school setting that exists where multi-class teaching is the norm:

> The school can be reached by traveling a dusty gravel road. When the school officially opened its doors, the number of children enrolled was 44, 30 boys and 14 girls. These children were taught in a one-room building made of tin and timber. The school is a small one with four teachers, including the head teacher and 60 children, who were taught in four groups as follows: classes 1 and 2; classes 3 and 4; classes 5 and 6; and classes 7 and 8.
>
> The school was established in 1936 and is controlled by a committee of local people. The school is situated beside a small hill. It is located about 17 kilometers from the nearest town. The 85 children who attend the school are from the nearby settlements. The people in the area are subsistence farmers and causal labourers who work on the copra farms. The children are mostly from families with low incomes. This is a four-teacher school covering classes 1 to 8. The current teachers had no previous experience in handling multi-class when they joined the staff.
>
> The school was built in 1968. It is located about 20 kilometers from the nearest town. A four wheel drive vehicle is needed to travel about 13 kilometers from the main highway over the gravel road to the school. Most of the time one will experience noise and dust from the logging trucks. The highest recorded roll was 73 in 1983. Now, about 48 students in classes 1 to 6 are taught by three teachers, including the head teacher.

In the case of Fiji, there are about 560 primary schools which are classified as rural and of these 38 per cent are in very remote locations (Learning Together, 2000). Generally, most of the rural schools and in particular remote schools are small in size and have multi-class teaching arrangements. It appears that the present statistics for schools with multi-class teaching in Fiji has increased due to the establishment of new schools in rural areas. In addition, the migration of people from rural to urban areas may have caused some schools even with straight classes to switch to multi-class teaching arrangements (Lingam, 2011). The recent Fiji Education Commission 2000 report indicates that many indigenous Fijian children attend schools organized with multi-class teaching (Learning Together, 2000). From the general economy of scale perspective, small schools, that is those with small student population and with two to four teachers, are not viable. It costs more for the government to pay teachers' salaries and for the school governing body to keep the school running. In the case of Fiji, only two primary schools are owned by the government and the rest are owned and run by non-government organizations, such as social and religious organizations. When compared with large schools which are found in urban areas, the per capita costs is high in small rural schools. Since education is a basic human right, the

notion of economy of scale should not be considered in the provision of educational services of any kind. Therefore, small schools are worth their existence in terms of providing children with education irrespective of their location and this justifies the existence of small rural schools with multi-class teaching arrangements. These small schools with multi-class teaching arrangements are somewhat similar to those pioneering one-teacher country schools: *The Schools Everyone Loves* (Low, 1979), and *Reincarnation of the One Room School-house* (Huber, 1975). Because of various reforms and innovations in education over the years, the work of teachers in the contemporary small schools have increased considerably than those one-teacher country schools when education was quite simple.

According to researchers, observers of education and scholars, multi-class is a difficult situation to teach especially when teachers are posted to these schools despite their having had no professional preparation for this kind of an teaching arrangement (Ali, 2004; Hargreaves et. al., 2001; Lingam, 2007; Mulcahy, 1993; Tuimavana, 2010). The recent Fiji Education Commission 2000 has this to say:

Many submissions to the Commission identified dual grade and multi-grade classes as a key obstacle to improving the quality of teaching and learning in primary schools (Learning Together, 2000, p. 83).

Added to this, schools with multi-class teaching are located in remote areas and teachers are isolated and have limited access and opportunities for professional development. This affects their professional practice as highlighted by Menon and Rao (2004: 51):

> They are isolated, poorly educated and have less access to improve their skills through new technologies. Due to their lack of access they are also less likely to be monitored and supported…working in an uninspiring environment where the sense of competence and self worth is low.

Some studies conducted in the new millennium in Fiji show that the quality of education for rural children is poor (Bacchus, 2000; Lingam, 2004; Narsey, 2004; Tuimavana, 2010). Teacher performance could be a contributing factor. Apart from the ministries of education, the overarching goal for parents is the quality education for their children. Similarly, various international organizations such as UNESCO and UNDP have been emphasising for decades on the need to provide quality education to all children irrespective of where they live. Unfortunately, the ground realities of the small island states of the Pacific, including Fiji pose considerable challenge to teachers in rural schools in achieving better learning outcomes of the children they teach.

To enhance children's education and for the achievement of Millennium Development Goals (MDG), Education For All (EFA) and other new initiatives, multi-class contexts need more attention from all stakeholders, namely, the education ministries for some constructive intervention strategy to boost teacher professional practice. Since teachers are the critical input to education, pre-service preparation and later adequate professional support to rural teachers should deserve a high priority in the provision of quality primary education (Lingam, 2012).

Pedagogical Practices

Unlike in straight class teaching, teachers in schools with multi-class teaching arrangements need to be more creative in their pedagogical practices in order to enhance meaningful learning in the children. The implementation of suitable pedagogical techniques such as individualized learning programmes, peer tutoring, independent study and small group teaching will help children find learning meaningful and in turn they will profit from schooling. These methods and approaches of teaching can also be successfully applied in straight class teaching situation, while the converse can pose considerable difficulties to children in their learning. Generally, a socially constructivist approach rather than a transmissive approach of teaching and learning is recommended for multi-class (Cornish, 2006; Lingam, 2007; Quist, 2005). Little (2001, p. 477) suggests that:

> For children to learn effectively in multi-[class] environment, teachers need to be well-trained and supported, well-resourced and hold positive attitudes to multi-[class] teaching.

Little's suggestion is worth considering if schools with multi-class are to be seen as having the potential in meeting the educational needs of rural children.

In a research conducted by Lingam (2007) in Fiji using a qualitative case study research design, the teachers of the case study school reported that they did not receive any form of professional preparation for multi-class teaching in their pre-service training programme. Neither did they receive any form of in-service training in multi-class teaching. In addition, teachers in the study indicated that teaching was carried out in accordance with the prescription supplied by the Curriculum Advisory Section of the Ministry of Education which is age-graded. Similar findings were reported by Hargreaves and her colleagues (2001) in their study which was conducted in Peru, Sri Lanka and Vietnam. The single-grade type organization of the curriculum is appropriate only for straight class teaching. Hence, the teaching in multi-class was carried out like straight class teaching. There is no guidance in the National Curricula and Teachers' Guides that provides support for multi-class teaching or indicates how the curriculum materials and subject syllabuses might be adapted. Referring to multi-class teaching in Mongolia, Yembu (2006,, p. 123) highlights a similar scenario:

> Although we have plenty of experience in conducting [multi-class] teaching, there hasn't been yet any national policy, teachers manual, textbooks particularly designed for [multi-class] teaching or [multi-class] curriculum and there is no organization or person in charge of the matter.

Likewise, Mulcahy (1993) expressed similar concerns with the multi-class teaching situations in Newfoundland and Labrador. A similar view was expressed by Quist (2005) with reference to the African countries, such as Gambia, Kenya, Lesotho, Ethiopia, Nigeria, Zambia, and Uganda. This suggests that the employing authorities of teachers continue to pay scant attention to teacher quality in rural schools. If teachers are not professionally prepared to teach in multi-class contexts, it is likely that they will adversely affect children's learning outcomes and their performance at subsequent levels of education (UNESCO,

1989). This is because the use of any teaching approach would wholly depend on the quality of teachers appointed to teach in multi-class situations. The competence of teachers in turn depends on the quality of their professional preparation. Many empirical studies have shown that teachers do not have the necessary skills and knowledge to undertake teaching in multi-class situations (Ali, 2008; Cornish, 2006; Lingam, 2007; Little, 2001; Quist, 2005). Not only theoretical but also practical preparation for multi-class teaching will enable pre-service teachers to use pedagogically sound practices to enhance children's school work. Theoretical preparation could encapsulate areas, such as organizing the classroom environment, teaching with small groups, peer teaching, assessment and evaluation, instructional resources and creating stand-by activities and using community support (Collingwood, 1991; Quist, 2005). Teachers posted to such schools will then have a range of pedagogically sound practices to effectively carry out the demands of work with creativity and in professionally stimulating and satisfying ways. The findings of a study conducted by Lingam (2007) in the Fiji context shows that most of teachers lack professional competence to undertake multi-class teaching as their training programme did not include any component on multi-class teaching. Quist (2005) also highlighted that most current teacher training programs both pre-service and in-service only cater for straight class teaching. Teachers need guidance and help in order to feel confident and then effectively teach more than one class in a classroom. The lack of pre-service training of teachers in multi-class teaching is a major challenge in providing children with a good quality education. It is therefore important that some modules on multi-class teaching are incorporated into the pre-service teacher education programmes and ongoing development of teachers for multi-class teaching are given due attention by the relevant authorities.

Snapshots of Initiatives to Strengthen Multi-class Teaching

The University of New England (UNE) and the Government of Bhutan have successfully worked in partnership whereby Bhutanese teachers go to UNE for training in multi-class teaching (Ninnes, 2006). This arose after a major shift in emphasis from teacher centred methods of teaching to being student centred and the introduction of the so called 'New Approach to Primary Education' (NAPE) (Laird & Maxwell, 2000). It appears that prior to NAPE teachers employed teacher centred pedagogical practices to carry out multi-class teaching. The teacher-centred models of teaching are long outdated and for multi-class teaching this method is unsuitable for improving children's learning outcomes. Initiatives like the NAPE, is important in meeting the professional development needs of those teachers teaching in multi-class situations. Not only when changes occur in the school curriculum but also new research on teaching and learning will require ongoing professional development of teachers to cope with new demands of work placed upon them (OECD, 2006). Ongoing investment in the professional development of teachers in handling multi-class will help rural children to achieve the best possible learning outcomes like their urban counterparts. Despite the contextual differences between Australia and Bhutan, the two countries still have a lot in common with regards to multi-class teaching and as such the training may have equipped these teachers with relevant knowledge and skills to cope

with multi-class teaching in Bhutan. As pointed out by Ninnes (2006), the professional development programme has been promising as an example of how teacher professional development can lead to improvements in multi-class teaching practices.

In the Free State Province of South Africa, the Department of Education and an agency from Germany collaborated to provide professional development to multi-class teachers (Soci, 2006). Similarly, in Sub-Saharan Africa the initiative of the World Bank on the Teacher Effectiveness Support Program helped strengthened multi-class teaching in the area (Higgins, 2006). In England, Forward (1988) designed a handbook on multi-grade teaching to help teachers and head teachers in their work in small schools. The book included aspects, such as classroom layouts, ways of organizing pupils to maximize their learning. Such support to the teachers will help in the effective delivery of educational services to the children in multi-class situations. Likewise, in Finland which has about 40 per cent of the primary schools with multi-class teaching arrangements, a multi-class component is included in the teacher education programme (Kalaoja, 2006). Such professional development opportunities afforded to multi-class teachers is a step in the right direction. The programmes will help these teachers better appreciate and effectively work in schools with multi-class teaching arrangements. Even such programmes can also help these teachers to be in touch with reality, trends and developments and to be up-to-date with professional literature on multi-class teaching.

With reference to the Pacific Island countries, a UNESCO handbook on *Multi-class Teaching in Primary Schools* was prepared (Collingwood, 1991). The book was a way of helping multi-class teachers cope with multi-class teaching and thereby maximize the impact of teaching on the children of Pacific Island states. This handbook was a much needed resource for teachers in the region:

> Teachers posted to isolated schools are too inaccessible to be visited by the Inspectorate more than very infrequently…These teachers are often posted to multi-class or composite schools despite their having had no pre-service preparation and supported by an inspectorate which likewise has had little specialized preparation. They have had at their disposal virtually no means for professional improvement; the inspectors were regarded with mistrust; their colleagues, including the head teachers, were scarcely any better off than they; and no training manuals of any kind existed. The present project attempts to improve the situation in all the three respects and it is for redress of the last, training manuals, that he present handbook was written, trialed and published (Collingwood, 1991:5).

The book include chapters on multi-class teaching, year group combinations, organizing classrooms, planning work, setting up routines, teaching with groups, peer teaching and making use of outside help. In addition, it includes a discussion on creating lively learning activities and describes ‘stand-by’ activities. However, in a study conducted by a team of researchers in Fiji, found that the handbook was too general and not quite applicable to Fiji classroom situations (Singh, 1996). This is true because multi-class teaching varies from context to context

and the handbook was not tailor made to suit Fiji's unique situation. Another interesting finding was that the handbook was still not available in the case study schools and even the head teachers showed only a hazy recollection of the existence of the publication (Singh, 1996). Provision of handbooks alone is not sufficient to equip teachers for multi-class teaching.

Initiatives in Fiji

Unfortunately, for many decades there has been an absence of any kind of development on multi-class teaching in areas such as pre-service and in-service teacher education programmes. Even no large scale studies were conducted in the area of multi-class teaching to inform policy and practice. It was in 2004 when a component on multi-class teaching was incorporated in the pre-service teacher education programme of the government-owned primary teachers college, namely, Lautoka Teachers College. This college has now amalgamated with other tertiary institutions to form the Fiji National University. The course entitled *Program Planning in the Multi-grade Classroom* has the following aim:

> Planning, implementing and evaluating the effectiveness of programs, form the core of teachers' work in the classroom, and builds upon and brings together the teachers' skills as facilitators of learning with their skills as classroom managers. All of these skills and the theoretical understandings upon which they are built are acquired through practice and reflection. Being able to plan programs for more than one year level in a single classroom reflects the reality of primary education in Fiji, particularly in rural and isolated areas where the majority of schools is small and contains multi-level classrooms. This course is therefore directly linked to a six-week-long practicum in a small school where the first two-week session is used for familiarisation and the identification of programs across all areas of the primary curriculum which the student teacher will teach. Following a two-week preparation period in the college, the second, four-week, session is used to implement and evaluate those programs (LTCUP, 2004. P. 4).

Some of the topics covered in the course include planning classroom work, organizing the classroom, developing and establishing routine teaching with groups, and peer teaching (LTCUP, 2004). Such a course was long overdue. It is envisaged that this course will help equip teachers with suitable pedagogies for learning and teaching to ensure the best possible educational outcomes for rural children. Since the course is part of the pre-service teacher education programme all students are provided with the theoretical knowledge and hands-on-experience in multi-class teaching. This is a milestone achievement for Fiji. Apart from pre-service training programme, the Ministry of Education might consider conducting some workshops for the ongoing development of teachers on multi-class teaching.

Conclusion

The multi-class teaching arrangement is certain to remain in Fiji and in other parts of the Pacific region and the world for the foreseeable future as part of the primary schooling structure. There is no other better alternative method than the existing arrangement to cater for children's education in small rural schools. The literature on the multi-class teaching arrangement illustrates that to improve the quality of education in schools organized in this way, pre-service teacher preparation and ongoing teacher capacity building is the long term solution. While the focus of this paper has been mostly on Fiji, other countries in the Pacific region too need to take some constructive steps to ensure future teachers are well prepared to work in schools with multi-class situations. Only then will children in such schools receive the quality of education that they rightly deserve, like their urban counterparts. Initiatives, like the one in Fiji, are a step in the right direction and could be followed by other countries in the region as a starting point towards the provision of quality education for rural children.

References

Ali, W. (2004). *Challenges in multi-class teaching: A case study in a Fiji school*. Unpublished Master of Education Dissertation, University of the South Pacific, Suva, Fiji.

Collingwood, I. (1991). *Multi-class teaching in primary schools. A handbook for teachers in the Pacific*. Apia, Western Samoa: UNESCO Office.

Cornish, L. (2006). What is multi-grade teaching? In L. Cornish (ed.). *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp. 9-26). Armidale, Australia: Kardoorair Press.

Forward, B. (1988). *Teaching in the smaller school*. London: Cambridge University Press.

Hargreaves, E., Montero,C., chau, N., Sibli, M. & Thanh, T. (2001). Multi-grade teaching in Peru, Sri Lanka, and Vietnam: An overview. *International Journal of Educational Development*, *21*(1), 499-520.

Higgins, C. (2006). Multi-grade issues in Sub-Saharan Africa. In L. Cornish (ed.), *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp.181-196). Armidale: Kardoorair Press.

Huber, J. D. (1975). Reincarnation of the one Room schoolhouse. *The Clearing House*, 49(3), Washington DC.

Kalaoja, E. (2006). Change and innovation in multi-grade teaching in Finland. In L. Cornish (ed.), *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp.215-228). Armidale: Kardoorair Press.

Laird, D. J. & Maxwell, T. W. (2000). Educational change in Bhutan: The UNE partnership. *New Horizons in Education*, *102*, 84-95.

Learning Together Directions for Education in the Fiji Islands. Report of the Fiji Islands Education Commission Panel (2000) Suva, Fiji: Government Printer.

Lingam, G. I. (2007). Pedagogical practices: the case of multi-class teaching in Fiji primary school. *Educational Research and Review*, *2*(7), 186-192.

Lingam, G. I. (2011, October 11). Multi-class a hurdle for teachers. *The Fiji Times*. p. 7

Lingam, G. I. (2012). The University of the South Pacific's Bachelor in Education Program: Meeting the challenges in rural teacher professional development in Fiji and the Pacific. In U. Baba-Nabobo, S. Naisilisili; S. Bogitini: T. L. Baba & G. I. Lingam (Eds.). *Rural education and remote schools in Udu, Fiji* (pp.208-228). Suva, Fiji: Faculty of Arts, Law and Education.

Little, A. (2001). Multi-grade teaching: towards an international research and policy agenda. *International Journal of Educational Development*, *21*, 481-497.

Low, J. (1979). The schools everyone loves. *NRTA Journal XXX*, San Diego.

LTCUP. (2004). *Lautoka Teachers College Upgrade Project: Diploma of Primary Education.* Lautoka, Fiji: Lautoka Teachers College.

Menon, L. & Rao, P. (2006). Multi-grade for remote and disadvantaged schools. In L. Cornish (ed.), *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp.165-180) Armidale: Kardoorair Press.

Mulcahy, D. (1993). Developing a distinctive approach for multi-grade classrooms: Some preliminary considerations. *Education Canada*, *33*(1), 24-29.

Narsey, W. (2004). *Academic outcomes and resources for basic education in Fiji: Disparities by region, gender and economic background*. Suva, Fiji: Institute of Education, University of the South Pacific.

Ninnes P (2006). The Bhutan Multi-grade Attachment Program. In L. Cornish (ed.), *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp.125-136). Armidale: Kardoorair Press.

Organisation for Economic Co-operation and Development[OECD] (2006). *Teachers matter: attracting, developing and retaining effective teachers.* Paris: OECD.

Quist, D. (2005). *Resource materials for multi-grade teaching*. London: Commonwealth Secretariat.

Singh, G. (1996). *Report on composite class teaching: An action research project at Lautoka Teachers College 1994-1995*. Suva, Fiji: Institute of Education, University of the South Pacific.

Soci, T. (2004). Multi-grade teaching: Experiences in the Free State Province of South Africa. In L. Cornish (ed.), *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp.157-164). Armidale: Kardoorair Press.

Tuimavana, R. W. R. (2010). *Developing and retaining quality teachers in rural Fiji primary schools*. Unpublished master's thesis. The University of the South Pacific, Suva, Fiji.

UNESCO (1989). *Planning for the recruitment and utilization of teachers: Module 5*. Paris: International Institute of Education Planning.

Veenman, S. (1995). Cognitive and noncognitive effects of multi-grade and multi-age classes: A best-evidence synthesis. *Review of Educational Research*, *65*(4), 319-331.

Yembuu, B. (2006). Current situation and future perspective of multi-grade teaching in Mongolia. In L. Cornish (ed.), *Reaching EFA through multi-grade teaching: Issues, contexts and practices* (pp.93-102). Armidale: Kardoorair Press.

Chapter 3: Students' and Teachers' Understanding of the Applicability of Classroom Science and Everyday Experiences

Kelesi Whippy

Introduction

Concerns about students' and teachers' difficulties in relating to classroom science using everyday experiences led to a study which explored 40 primary school students' (12 to 14 year-olds) and five teachers' perceptions in this area. The study focused on exploring students' and teachers' understanding of the applicability of classroom science in everyday life in a co-educational ethnic Fijian primary school. Views were elicited using phenomenology- a methodology that has not been extensively used in science education research. In obtaining data, questionnaires and semi-structured interviews were administered to the participants at the target school in a period of seven weeks. This chapter includes highlights of the methodology, the analysis of data, interpretations and discussions of findings.

The Phenomenon

*Am I?*I sit and listen to the squeaky sound of the machine
the laughter, recitations and the soft giggles …
"*Well, um, er, it's like a potato.*"
"Oh! What was that? What did you say?"

"Hmm…it's not like dalo or tavioka, like we have here."
"Yes, yes go on."
"Cause it's hard to swallow."
"Do you take time to chew, keep it in your mouth…?"
"No, cause I worry sick and I don't like the taste."
"… it is good for your health and it helps you do better."
"If only I am told I would not be feeling like an alien or am I?"

Familiar statements such as those shown above do not reflect lazy students; they are statements of facts. The above reflection is a lament of a student participant in this study as she approximates the frustrations commonly felt during science classes. A general picture that emerges from this discussion is that the way science is taught at school, has given it a foreign image. The Fiji Islands Education Commission Report (2000) also highlights that the way science is taught in Fiji schools is located within, and exclusively derived from Western contexts. This study maintains that such sentiments may be related to the belief that science is 'culture free' and is a discipline that comprises of a set of objectives and universal facts, rules and procedures.

Methodology

I used Moustakas' (1994) phenomenological methodology blended with ideas from Guba and Lincoln (1989) to explore and understand experiences in science learning both in and out of the school. Phenomenology, simply put, is the study of phenomena; the way the world appears to the human experience. Max van Manen sees phenomenology as essentially the study of *lived experience* or *life-world* (van Manen, 1997). The main aim of any phenomenological study, therefore, is to identify or comprehend meanings of human experience as it is lived by the participants (Polkinghorne, 1983).

As my research project developed, I realised that this phenomenological quest was in tune with my own desire to understand not only my perceptions of science, but also my roles in the Fiji education circle, my school, and community. As I started to understand more about research, and started to think more seriously about the most appropriate research approach to use, I then saw phenomenology as most appealing to the inherent and unavoidable subjectivity of my judgments and my shifting engagement with the study as a whole.

The use of the first narrative person (the pronoun *I*) is a reflection of my ever-growing critical understanding of the research process. It is also an attempt to give my engagement in the research process personal meaning. It was at the stages of reading about research methods that I learnt about the central role that I play in this research. Therefore, the use of the first narrative person is also an attempt to reflect my frustrations with the research process; my struggles to be allowed to tell about the phenomenon of interest from its core.

Research Instruments

In addition to semi-structured interviews, two questionnaires were constructed and used to gather information about how students and teachers related classroom science to common everyday experiences in the community such as food preservation.

Students' Questionnaire

The first questionnaire included 22 questions: 21 closed response-type-questions and 1 open-ended question. The first 10 questions required students to state

whether they 'Agree' or 'Disagree' with statements about commonly used methods of preserving food. These questions were also given to the participating teachers, to compare their views with those of the children's opinions.

The next six questions were used to explore students' opinions about what they considered important or unimportant in science learning. The next three questions targeted the students' attitude towards learning science. These questions were categorised using a three-point rating scale: happy, sad, neutral (is not concerned). Finally, the latter three questions included personal details of the participants.

Teachers' Questionnaire

A separate questionnaire was designed for teachers use only. It had 23 closed-response questions that probed opinions on the nature of science and classroom science practices. In this questionnaire, the participant teachers were also requested to provide additional information about themselves such as the number of years of teaching experiences they have had and the highest qualification attained. These sources of information were useful particularly, in determining the extent of teachers' views of science in relation to everyday interactions. For example, a teacher graduate with a good number of years of teaching experience, deliberated meaningfully on aspects of science outside the classroom. The background check was added information, particularly when I did a pilot study concerning two teachers and two students in the suburb where I live. Ideally, this exercise was of great help as it gave an opportunity to improve and/or delete some of the questions. In addition, it helped generate new questions.

Interviews

Consequently, in this study, a semi-structured interview (Cohen & Manion, 1994) was used to check on the dependability of the data collected in the questionnaire. The students' interview questions were constructed mainly around issues that emerged from responses to the questionnaires. These issues included opinions about the nature of science and what science is, interests in science, attitudes towards learning science, experiences in science lesson and the applicability and relevance of school science learning to everyday experiences.

The teacher participants were also interviewed on their perceptions of the nature of science, the strategies that they use to teach science concepts, skills and processes, what should be valued and emphasised in the science curriculum, the place of cultural/traditional practices in the science curriculum, the extent to which they incorporate everyday knowledge and skills in school science, the influences of everyday experiences on how they teach concepts and skills in science.

Data Collection and Recording

The questionnaires were administered prior to the interviews as I felt that the responses from the questionnaire would assist re-formulate the interview

questions. Ultimately, the responses indicated the extent to which participants understood or misunderstood aspects relating to this study. All student interviews were conducted at the school staff room. They were mainly conducted in the morning between 8am and 9am, as classes did not formally begin until 9 o'clock every morning. However, due to time constraints, some students gave up their free time, recess and lunch times, to be interviewed. I am greatly indebted to the participants and to the school as a whole, for making such allowances.

The interviews were informal to allow for dialogue to occur naturally. As I became a more confident interviewer, I grew flexible about moving to certain issues that the participants indicated to talk more on. This growing confidence also enabled me to relax and enjoy the interviews, particularly with the students. At this stage of the study, I was someone familiar as I had taught with some of the teacher participants. However, I was very much aware that this familiarity could be a source of bias during the data collection process (Tilley, 1998). Moustakas (1994) idea of *epoche* (which is defined later) provided guidance throughout the research process and ensured an appreciable level of objectivity. The interviews were audio recorded and the tapes were later transcribed. Although the interviews were conducted in the English language, the participants, both students and teachers, from time to time offered explanations in the Fijian language.

Due to issues of anonymity and confidentiality, a coding system was developed to describe the participants through their assigned roles. Instead of using the participants' real names on interview excerpts, the letters S and T are used for students and teachers respectively. In addition, the letters M and F indicate whether the participant was a male or female. Numerals that indicated the order in which the participants were interviewed, also accompany the letters. For example, T2F meant the second female teacher that was interviewed, and S1M meant the first male student that was interviewed.

Analysis of Data

My growing awareness of the impacts of my own personal biases on the data collected and genuine concern for authenticity in the same data were two competing issues that remained paramount during the whole research process. 'How could I ensure that I remained objective and at the same time close to the participants?' or 'How could I interpret what the participants said and at the same time claimed that the data was free of biases?' were examples of questions that I often asked myself. These concerns led to the ideas of *epoche* (Moustakas, 1994) and *bracketing* (Murray & Mensch, 2008).

Epoche

Epoch is a Greek word which means to 'refrain from judgment' (Bednall, 2006, p. 123). This label, as Moustakas (1994) explains, is the phenomenological process of setting aside prejudgments and maintaining an unbiased, receptive presence. This idea demanded that the analysis and interpretation of data be ongoing. Thus, throughout the analysis stage, and even during the interview process, I was aware of my own prejudices and perceptions of the target phenomenon. This awareness

ensured that I maintained an open mind to all responses that I heard, transcribed, or interpreted.

Bracketing

Bracketing involves thoroughly examining and then suspending one's beliefs so that a description about the phenomenon is not contaminated with the researcher's bias. In other words, Murray and Mensch (2008), in a study towards exploring perceptions for potential athletes, stated that the aim of bracketing is to free ourselves from our own thinking and seeing things, as undisturbed as possible by our own knowing. Therefore, bracketing the question involves a specific setting aside of prejudgments for the phenomenon understudied.

At this particular stage, subsequent questions were structured around the foci of this research which was, to draw meaningful connections between classroom science and everyday life. The specific question asked was "Can you think of ways in which this idea (or process) of science is practiced elsewhere?" The question was very open in nature, with follow up discussions led by the participants themselves. Openness was critical and the exchange was entirely open, with few direct questions asked. Geertz (1973) had described this process as getting at what participants really experienced, from the inside out, not simulations of what they thought they experienced. Therefore, it was important not to look for only what was 'said', but also what was said 'between the lines'. Hence, verbatim did not necessarily capture all of what was 'really said' during the interviews. Manen (1997) in his support for the importance of paying attention to silence, the long [...] and short pauses [er, um], as it is herein that one may find the taken for granted or the self-evident. Each interview was tape recorded and transcribed. I started by comparing the data from the interviews (what was said) with the Agree/Disagree responses on the questionnaires (what was written). This way, it was easier to compile a holistic analysis as the basis for interpretations. Data was then examined, organized and grouped into meaningful clusters called themes.

Interpretation of Findings

The following themes that had emerged from the data are explained in detail in the consecutive paragraphs: science deals with abstract or difficult ideas; influences of the 'exam-oriented' curricular on perceptions of science; science should deal with experiments and practical work; teachers' practice is constrained by traditional classroom routine and protocol; over-reliance on the teacher for the 'right answer'; interests and performance in science decrease as students' progress up the class levels; attitude to science is related to performance or achievement in science; lab and science equipment are important for effective science teaching and learning; classroom science is important and useful for productivity and sustainable living in the community and, limited understanding of the scientific bases of everyday practices.

Science Deals with Abstract or Difficult Ideas

In particular, the successive responses revealed that science was perceived to be a subject that is 'out there' to be studied. As a result, there seemed to be a misconception that, involvement in science through abstract learning was what science learning was all about in the target school. It was also important to note that a significant proportion of students, (15 out of 40 or 37.5%) associated science as an abstract phenomenon.

Question: *Do you see science anywhere around you? (Please elaborate)*
S4M: Yes. The picture of a forest on the wall. The patterns on the charts.
T1M: The study of our surrounding, our environment.
T2F: Everything around us and in us.

The marginalised view that science was something 'out there' to be studied, arbitrarily I believed, hampered meaningful appreciation of the fact that students could be tasked to engage in scientific sense-making practices at classroom level. It could be strongly argued, as confirmed by the preceding remarks that teachers' understanding of the nature of science determines students' perceptions to a great extent.

A meaningful understanding of the nature of science by students is always accompanied by effective changes in teachers' beliefs and pedagogy. In this study, however, the effectiveness of teaching the nature of science appeared to be related to how teachers' view their roles in science lessons. In particular, the existence of too many external examinations (two at primary and three at secondary level) is a contributing factor to the 'examination-focused' teaching styles adopted at class levels which is discussed in detail in the next theme.

Influences of the 'Exam-oriented' Curricula on Perceptions of Science

Interestingly, a handful of the students acknowledged that school science should be made meaningful to them for reasons such as:

Question: *Can we learn science anywhere else? Why do you say that?*
S26M: Yes, because it shows us interesting things we do not know…

However, some students viewed science as being irrelevant outside the classroom; an indication that students' perceptions of science were still influenced by the exam-oriented curriculum and teaching methods.

S8M: Yes […] so that we will pass our exams.

On one hand, the purpose of learning science, according to the nature of these responses, was mostly for study to pass examinations. On the other hand, most students could identify the relevance of science in their everyday life as confirmed by the next set of responses:

Question: *Are you aware that most of the things you do outside your classroom (or as part of your culture) is science or related to science? Can you give some examples?*

S26M: Yes. Playing rugby, force is used.

S39M: Yes, maybe. You know, mixing 'yaqona' to make a solution….

The views expressed here showed that students' had some ideas of the meaningfulness of science. Specifically, the perceptions were from the everyday concepts of science students had brought along with them to school and the language they used to describe them.

Furthermore, it needed to be noted that though certain concepts may not have been suitable in some contexts, science teachers still delivered content as it was from the book. For instance, the topics found in the present lower primary science syllabus, were either in part or in general foreign to the experiences of many rural ethnic-Fijian students.

A teacher participant in a description of an unusual science lesson lamented an example.

T4F: The students were doing an experiment on heating. They had different objects to heat – a nail, a piece of chalk, wood, etc. They were working in groups and I noticed that this particular child was still holding on to a heated nail even after everybody else had completed the task. The rest of the students had returned to their places and have begun writing their observations but this child was still holding onto the nail and the nail was still being heated. In my haste, I grabbed the nail and exclaimed in agony as my hands got terribly scorched by the heat. I turned around and started to growl at her for taking far too long in her experiment and that the nail (being a metal) should have been too hot for her to handle in minutes, like the rest of the students. Well, I looked twice at the sheepish grin and to my amazement; it hit me on the head…this child is from '*Beqa* Island' – an island people famous for fire walking displays. From then on, I believed the myth surrounding the people of that particular island to have been given the '*mana'* or 'state of perseverance' to endure heat or burning things…

In this case, the objective of the lesson was to determine which objects were good or bad conductors of heat. The general notion that metallic objects are supposedly good conductors of heat will continue to be rejected by the people of Beqa Island; a group of island people who are renown for enduring heat and are commonly known in Fiji as the 'firewalkers'. In turn, students have been taught over the years to accept information that is contrary to their real life experiences for the purpose of passing examinations. In other words, the island people of Beqa were forced to accept a science concept for the purpose of writing the desired response in an examination that proved meaningless and irrelevant to their village and community life practices.

Science Should Deal with Experiments and Practical Work

In this study, there was a consensus by the students' and teachers' that scientific concepts were more accessible and more easily retained when supported by practical involvement. This finding is supported by Rudduck et al. (1996) who emphasised the fact that practical work offer students a greater sense of ownership.

The student participants had a great deal of appreciation for doing experiments in their science classes, as indicated by the following responses:

Question: Can you name some things that you like about your science class?
S3F: Doing, er […] experiments.

Further, as Garson confirms, 'curiosity aroused by investigations can lead pupils to realise that the science they are doing has applications to their own lives' (Garson, 1988, p. 5). This realisation is an important aspect of scientific education.

In analysing the data, it emerged that 72.5% of the students like science because of experiments, 27.5% express a dislike for science as, according to them, the teacher 'does the experiments' or 'the teacher writes experiments on the blackboard'.

Question: Is there anything that you don't like about your science class?
S38M: When the teacher talks all the time or write experiments on the blackboard.

There is a widespread agreement by students that there are too few opportunities for them to engage in practical work. This point, which is also highlighted by a number of other students, confirms that whilst practical work has been an integral part of science, the classes seven and eight students at the target school have had fewer opportunities and exposure.

Surprisingly, the teachers also consider practical work an important component in teaching science concepts. However, due to traditional classroom routine and the obligations of keeping up with lesson times, most often teachers find themselves in very 'tight spots'.

Question: What's your favourite subject?
T1M: I like Maths. I like teaching English and Social Science and Health, and Fijian but not Elementary Science… you know, doing experiments and all that, because all those things need a lot of time to do.

A common justification that most science teachers deduced was the insufficient time allocated for science in the school programme. The teaching pattern of adhering to rigid structures in the lesson and timetable do not encourage practical work with students and may have accounted for some of the teacher resistance. Consequently, it was evident that to some extent, experiments and practical involvement, at the target school though considered important, was not fully realised.

Teachers' Practice is Constrained by Traditional Classroom Routine and Protocol

In considering the following opinions about science teaching being a challenge, it was evident that teachers at the target school, amongst the constraints that have been previously mentioned, struggled to teach certain concepts in the prescribed curriculum.

Question: *In your opinion, do you consider science teaching a challenge? If so, how is it a challenge? If not, why is it not?*

T3F: Oh, yes very challenging. Firstly, I am weak in science and maths. As a student, I did not have any interest in these two subjects at all. Secondly, as a teacher of science, the unavailability of resources such as science equipment continues to put pressure on my work. In addition, the concepts are sometimes hard so if we have the apparatus maybe it will help to teach science better.

These statements sounded almost like confessions unraveling an unfortunate reality of science interactions at classroom level. In the lower classes, students were encouraged to manipulate things using their hands and senses. As students progressed in their science classes, they were introduced to ideas that they must simply accept, whether they understood the concepts or not. In addition, during the early years of schooling, according to the following descriptions, students interpreted their science learning experiences as a positive adventure. This may be partly due to the ways in which science was conveyed in class.

Question: *Have you always been good in science?*

S36M: Yes, I was good because I always have high marks.

An interesting logic given below as a counter-act to the concerns given above relayed the discomforts and pressures a teacher endured when teaching science particularly if aspects of the contents were unfamiliar.

Question: *What do you think of the science curriculum?*

T3F: The content is too much. For example, there are far too many activities for each unit. It becomes too much for the examination classes given the restricted time frame.

The teacher further explained that in an attempt to complete the content, the curriculum would usually be taught in a rush to finish the book at the expense of depth and understanding. In turn, the teaching and learning scope became very narrow with over-reliance on teacher-centred pedagogies thus there was very little room for self-exploratory and self-motivated teaching and learning styles.

Over-reliance on Teacher for the 'Right Answer'

Teachers acknowledge the need for self-exploration in science.

Question: *What do you think is the essence of science teaching and learning?*
T4F: Making students take responsibilities for their own learning. Make them discover for themselves. Help them create new knowledge by providing the resources necessary for them.

The teacher appeared to have contradicted themselves as in practice they do not freely allow their students to undergo trial-and-error learning opportunities; to learn to be independent thinkers and effective problem solvers.

Question: *What do you do if the outcome of an experiment does not turn out the way you had planned?*
T2F: Well, let me tell you this. I try out the experiments myself before the children do to ensure that when they actually do the experiments they will be doing the correct things. Therefore, during the activities I will advise them, "you're not doing this right, you need to do it this way", that's why I need to do the experiments first so that the results of the experiments turn out the way the prescriptions say.

This is firsthand experience of what researchers had talked about in past studies concerning effective teaching and learning strategies. A documentation of a number of similar instances (Muralidhar, 1989) where drilling and coaching were the routines of science teachers, is the consequences of a lack of appropriate knowledge and expertise to handle concepts and skills in these situations particularly, as science advances in class levels.

Interests and Performance in Science Decreases as Students' Progress Up the Class Levels

As previously mentioned a consequence of the decline in practical work is that the subject matter became less accessible and student interest waned. In turn, a fundamental factor of waning interests and performance could be attributed to the fact that science concepts and skills become more sophisticated and too advanced to negotiate, as students progress in class levels, particularly if teachers and learners do not relate well to the material studied.

Question: *Is there anything that you don't like about your science class?*
S9F: Hard to understand science.
S12M: Writing long notes.

Another causal aspect to students' lack of interest in science, I suspected, is the lack of realisation that most of the experiences that students were engaged in outside the confinements of their classroom (as part of their culture) was science or related to school science. Interestingly, these responses confirmed my suspicion.

Question: *Are you aware that most of the things you do outside your classroom (or as part of your culture) is science or related to science? Can you give some examples?*

S18M: No, I did not know but now, during this interview, I know some things are related to science.

From a personal feeling, it was discouraging to note the negative experiences students go through during science lessons that obstruct their developing scientific awareness, knowledge and interest. In a report, Muralidhar (1989) had argued that science textbooks, teaching and assessment practice emphasise learning of answers more than the exploration of questions. As a result, teachers continue to be encumbered with an overcrowded curriculum as they struggle daily in their work, thus contributing to undesirable effects on students' interests, achievements and performance in science.

Question: *In your opinion, do you consider science teaching a challenge? If so, how is it a challenge? If not, how is it not?*

T5M: Yes, I could say that it is indeed very challenging because in most cases I really have to struggle with certain terms and concepts which I find quite confusing.

Question: *Do you think science is supposed to make sense? Why do you say that?*

S29F: Yes, […] er, so that I know the answers to write in the exam.

Comments as these are reflections of the limited realisations of the usefulness of science in aspects of life other than an acquisition of knowledge to be tested or evaluated at the end of instructions. Most of these attitudes could be attributed to how science had been taught at classroom level; a hard subject that could only be memorised for assessment purposes.

Attitude to Science is Related to Performance or Achievement in Science

Students were of the view that their level of interest in science was related to how well they performed in tests and exams. Students' perceptions centered on the premise that, if they were 'good at science' and 'achieved high marks in tests', their confidence was greatly improved and the subject was of greater interest to them. When questioned how they rated themselves in science, students revealed the following responses:

Question: *How are you at science? Poor, average or good? How can you tell?*

S12F: Good. All my subjects are poor, only in science it's good – I score good marks.

These views were understandable in that students had been taught from the early stages of schooling to strive for maximum marks. Achieving high marks was an

indication that concepts were well understood and internalised. Within these comments also, one could find an evaluation of the teachers' roles in their success with the subject—an aspect that increasingly dominated children's thinking as public examinations loomed into view. This finding confirmed that over-reliance on performance and achievement had taken away the essence of sense-making in science lessons.

Similar comments were expressed by a student and a teacher when asked why science should make sense and meaningful:

S29F: So that I know the answers to the exams.

T2F: I do not have any choice but to teach according to what is being examined. If I don't then my supervisor will mark me down resulting in no-salary incentive. We are always reminded in staff meetings to cover the entire syllabus that will be asked in the external examinations.

A further analysis of the science curriculum revealed that little regard was given to inculcating life-long skills. This means that teaching for understanding of what students learn at school for application in their real life situations in the homes and communities, was lacking. Discussions with teachers revealed that it was evident that teaching was directed towards the main (examinable) subjects and that the focus had been on facts and figures, and memorised processes and skills. When students were seen as able to recall facts on paper, learning was assumed to have taken place.

Lab and Science Equipment are Important for Effective Science Teaching and Learning

The unavailability of resources such as science apparatus, for example, test tubes, flasks and tongs to hold 'heated' objects had been an on-going problem in the teaching and learning of science at the target school.

Question: *In your opinion, do you consider science teaching a challenge? If so, how is it a challenge? If not, why is it not?*

T3F: Oh, yes very challenging. Firstly, I am weak in science and maths. As a student I did not have any interest in these two subjects at all. Secondly, as a teacher of science, the unavailability of resources such as science equipment continues to put pressure on my work. In addition, the concepts are sometimes hard so if we have the apparatus maybe it will help to teach science better.

As indicated by the response, teachers at the target school suggested that it would be enlightening to have a science laboratory as some topics in the science textbooks required related lab-work. However, as pointed out in the following comment, due to the unavailability of proper science equipment, the experiments and lessons were done using the chalkboard.

Question: *Can you name some things that you like about your science class?*

S3F: Doing experiments. We don't do experiments. I don't like it when the teachers do the experiments themselves.

Although, the use of laboratories and proper science equipment may be considered reliable tools for effective teaching and learning, the goal in science education is focused on inquiry and critical thinking. Interestingly, there was little evidence that a typical science class, as was the case in the target school, had been successful in directing students towards this goal. It is through critical inquisition that students are trained to utilise the knowledge and skills they have acquired in their science classrooms to their immediate surroundings.

Classroom Science is Important and Useful for Productivity and Sustainable Living in the Community

When teachers were asked about their views on the extent to which science could contribute to improvement in the quality of living standards in the community, the reactions disclosed an interesting thread:

Question: *Is there any relevance of the science children learn at school for their daily life in the community? Please give an example for your answer.*

T4F: Yes, a lot of relevance as they (the students) are just beginning to realise the significance of formal schooling to community living. For example, studying plants, they learn about the usefulness of plants – giving out the desired oxygen for us to breathe in and making use of the carbon dioxide we breathe out. Hopefully, when they go back home, they are motivated to conserve plants, less cutting down trees and the like.

For the majority of the teachers' responses, there was an indication that classroom science greatly contributed to improving life practices in the homes and communities of their students. In comparison, students expressed similar sentiments about the importance of learning science.

Question: *Do you think science is important? Why?*

S6F: Yes, because sometimes, we, er, sit it for assessment.

S18M: It is important to learn science because many questions will be asked when you're working for an electric company like the FEA (Fiji Electricity Authority).

These remarks imply the thought that careers such as, electrical engineers, electricians were associated with science. What these findings seemingly suggested was science had a marketing problem. If the main value that pupils are placing on science is its instrumental value rather than its intrinsic interest, then science teachers should endeavor to make clear the wide range of occupations which scientific knowledge supports, how it might be used, and why it is useful.

At the time of this research, the attitude of the students at the target school would appear to be summarised by the view that studying science is important in everyday life experiences but not for me. A closer examination of the many reasons provided for the importance of science showed a marked difference between boys and girls in the nature of the statements offered.

Girls had little difficulty in offering explanations for the importance of science to themselves and to their everyday practices. A motivating example is shown in the following comment:

Question: *Do you do things at home or at a function that might involve science? Can you tell me what these things are? (Probe: Can you tell me more about it?)*

S23F: Yes. Making lei, it is like doing experiments – you make things with your hands.

To some extent, the view expressed here confirmed what the literature surrounding children's science involves. Children love to manipulate objects using their hands, in other words, learning science become relevant and sensible if engagement was practiced. In the case of this participant, science learning was associated with plaiting (or weaving) as a result of experimenting with 'your hands'. Boys, on the other hand, had little to say about the importance of science either to themselves or to their everyday lives. What they did say was very similar to the comments made by girls, although the common examples they offered depicted their traditional gender- related roles:

S1M: Smoking fish, making lovo.

Central to the differences in these views were their significant roles in the community. In most Fijian contexts, the women and girls are confined to the kitchen mainly involving domestic work and other feminine duties while the men and boys do the masculine tasks. For instance, these tasks would include general maintenance work in and around the homes. Hence, it was noticeable that the nature of the responses in this section had direct implications of the participants' roles and responsibilities in the homes.

Interestingly, the roles discussed could be an asset to learning science meaningfully in the sense that teachers could use students' experiences as support material to teaching certain concepts and skills. Realistically, some concepts can be challenging in nature, for instance, in questionnaire 1, all the participating teachers affirmed that *'Different foods have different ways of preservation methods for example, foods that contain a lot of water take less time to preserve than foods that contain less water'*. For many, the nature of these responses could indicate an oversight, seeing traditional knowledge as too trivial to be of value.

Participating teachers may be ignorant of the fact that, *'foods that contain a lot of water take a longer time (not less time) to preserve than foods that contain less water'*. If teachers took extra time and initiative to use children's knowledge and experiences, at least most of the discrepancies in conceptual understanding would be minimised. It is likely that teachers were, not at all, concerned if they

were contributing to widening the scope of misconception in their own science classes that could have a negative effect in sustainable living in the community.

Limited Understanding of the Scientific Bases of Everyday Practices

Vital to any such course, as well, would be a component that allowed for the exploration of aspects of science in everyday situations. From the teachers' perspective, such an element is essential to constructing a connecting thread between classroom science and the 'real' world of the students, providing the subject with relevance that no other mechanism can. Nevertheless, the strength of the views expressed here suggested that the link between science and everyday events was too often ignored. In considering these responses to determining the relevance of what was offered at classroom level to daily life practices were reflections of the extent to which science is taught using everyday experiences:

Question: *Do you relate to everyday experiences when teaching science concepts and skills? Can you tell more about how and when you do relate?*

T1M: Er…sometimes, not all the time because most of the time, the books think otherwise, we just go by the book.

Question: *When do you relate?*

T1M: Only when…in…lessons on the environment, when we go and look at the leaves, the plant that's when we talk about the plant that's when we talk about the medicines (herbal) and stuff e.g. the pawpaw plant, children come up with all sorts of medicinal aspects of the different parts of the pawpaw plant.

There was a 100% affirmation by teachers that classroom science concepts and skills were relevant to everyday practices. Interestingly, when students were asked if they could draw upon science-related experiences in their homes, the responses revealed very limited understanding.

Question: *Do you think it is possible to do science at home? Can you give examples?"*

S4M: Yes, boiling tea, er, when tea is boiling and [Pause] the air is evaporating (Did not elaborate).

Similarly, when students were probed, if they could recall some cultural practices that are similar to school science a degree of uncertainty was detected.

S18M: Smoking fish, making lovo (hesitant to elaborate).

A strong finding from this research revealed that students described very limited comparisons between school science practices and everyday phenomena. Failure to make such connection has the the potential to alienate many pupils from the subject.

Implications of My Findings

This research was an exploration of students' and teachers' views about everyday experiences in relation to scientific phenomena as an attempt to assist teachers build on the everyday ideas about science that students bring into their classrooms. Thaman (2001) emphasised the importance of securing a curriculum that is inclusive of our ways of living. Thus, it is recommended that the science curriculum include making deliberate connections to processes involved in meat and crop production or, how the older generations cleaned their clothes and, the conservation methods of food and water. From a personal standpoint, this calls for a science curriculum that includes authentic representations of students' and teachers' experiences. A curriculum which breeds learning experiences that are rooted in students' everyday experiences, not only will these add meaning to life at home, but, will also provide meaningful links and interest between what is done at home and that is done at school.

In summary, discussions of science-related everyday issues also enable students (and teachers) recreate conceptions and alternative theories about the underlying concepts to be raised and clarified, enabling them to construct a deeper understanding. Studies by Cook-Gumperz (1986), Genesee (1987), Phillips (1972), Spindler and Spindler (1987), Trueba, Guthrie, and Au (1981) and, Wells (1981) had argued that the relationship of culture and cognition is frequently coupled with the suggestion that learning is facilitated by using everyday life experiences in the classroom that are culturally harmonious with communication patterns of the home. Therefore, teachers and students need to be given the opportunity to develop the necessary links between classroom science and everyday experiences in order to make sense of the concepts and processes that are often meaningless and purposeless in their contexts.

Conclusion

The findings from this study offer a window into students' and teachers' perspectives of their experiences of school science and everyday situations. On the negative side, students reveal limited knowledge on how scientific concepts and processes are involved in everyday phenomenon and vice-versa. On a more positive note, students and teachers see the study of science as important and think that science should be relevant to everyday living, though the nature of their responses reveal otherwise. The implications of these findings and the insights they provide could be used extensively to assist further research initiatives in this area. It is inevitable that a curriculum that acknowledges and encourages a wide variety of cultural perspectives of science education will generate learning opportunities outside of the restricted context of the school. It follows that we can re-orient prescriptions away from the pursuit of facts and memorised knowledge and towards procedures with more humanitarian ends that take into account the learners everyday experiences as backdrop for the process of discovering scientific notions.

References

Bendall, J. (2006). Epoch and bracketing within the phenomenological paradigm. *Issues in Educational Research, 16*(2), *123-138*

Cook-Gumperz, J. (ed.). (1986). The social construction of literacy. *International Journal of Qualitative Studies in Education, 5*(4), *311-323.*

Cohen, L. & Manion, L. (1994). *Research Methods in education (4th Ed.).* London: Routledge.

Fiji Islands Education Commission Report (Eds). *(2000). Learning together: directions for education in the Fiji Islands.* Fiji: Government Printers.

Garson, Y. (1988). *Science in the Primary School*. London: Routledge.

Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.

Genesee, F. (1987) *Learning through two languages: studies of immersion and bilingual education.* Cambridge MA: Newbury House.

Guba, E. G. Lincoln, Y. S. (1989). *Fourth Generation Evaluation.* California: Sage.

Murray, M. & Mensch, J. (2008). Choosing a Career in Athletic Training: Exploring the Perceptions of Potential Recruits. *Journal of Athletic Training. 43*(1), *70–79.*

Moustakas, C. (1994). *Phenomenological Research Methods.* Thousand Oaks, CA: Sage.

Muralidhar, S. (1989). *An Exploratory study of a science curriculum in action: basic science in Fiji.* Unpublished Thesis (Ph.D.), Monash University, Melbourne: Australia.

Phillips, S. (1972). Participant structures and communicative competence: Warm Springs children in community classrooms. In C. Cased, V. John & D. Hymes (eds.). *Functions of Language in the classroom.* New York: Teachers College Press.

Polkinghorne, D. E. (1983). Phenomenological research methods. In R.S. Valle & S. Halling (Eds.) *Existential-phenomenological perspectives in psychology*. New York: Plenum.

Rudduck, J., Chaplain, R. and Wallace, G. (Eds). (1996). *School Improvement: What can pupils tell us?* London: David Fulton.

Spindler, G. & Spindler, I. (1987). Interpretive ethnography of education: at home and abroad. *International Journal of Qualitative Studies in Education, 5*(4), *311-323.*

Thaman, L. (2001). *Towards culturally inclusive teacher education with specific references to Oceania.* Keynote address, 11th World Congress of Comparative Education, Seoul, July 2-6, 2001.

Tilley, S. A. (1998b). Conducting respectful research: A critique of Practice. *Canadian Journal of Education, 23,* 316-328.

Trueba, H. T., Guthrie, G. P. & Au, K.P. (Eds.). (1981). Culture and the bilingual classroom: studies in classroom ethnography. *International Journal of Qualitative Studies in Education, 5*(4), 311-323.

van Manen, M. (1997). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd Ed.). London, Canada: The Althouse Press.

Wells, C. G. (1981). *Learning through interaction: the study of language development.* London: Cambridge University Press.

Chapter 4: Literacy in the Pacific: Unlocking Student Potential—Do Pacific Libraries Hold the Key?

Pam Bidwell

Introduction

Literacy is a key requirement to achieving Millennium Development Goal 2 of universal primary education. School and public libraries can provide many opportunities for the poor by giving free access to educational resources such as books, journals, newspapers and internet resources. However, some development opportunities are being missed because many libraries are not well resourced. There is a common perception that Pacific children are not pre-disposed to reading, but this is undermined by research showing that with stimulating resources, children will read. Many schools rely on workbooks and textbooks, but their limited libraries with outdated stock give few opportunities for children to explore class topics in more detail. A well-functioning library makes significant improvements to student learning outcomes.

In June 2011 the Pacific Islands reached a population milestone of 10 million people. An estimated 188, 000 will be added to the total every year - the population is expected to reach 15 million by 2035 (SPC, 2011). On average a third or more of the Pacific population is under 15. This "youth explosion" has many implications, particularly for education and economic development. To survive in the twenty-first century environment, school students need to be well prepared to achieve their desired educational outcome. However, language competency and literacy issues amongst school students can be impeding to national and regional development.

Literacy Defined for the Twenty-first Century

Literacy is popularly understood as the ability to read and write, but this ability encompasses much more. Functional literacy was defined in 1978 by UNESCO as the ability for a person to engage in tasks that are necessary to function within

the community, and to continue developing their skills in reading and writing (UNESCO, 2006). This is now often referred to as working literacy. The purpose of literacy is also important, that reading is an important key to unlocking learning. A key element of literacy is acquiring an effective vocabulary to learn. A child who has learned the basics of reading has the tools to explore the world and create their own place within it. An extensive vocabulary can effectively study any subject, in the same way as a key works smoothly within a lock: opening the door to information. Doctors, teachers, scientists, managers all need highly functional literacy to become masters of their profession.

A poor vocabulary is like a badly functioning key that jams in the lock, restricting access to resources and ultimately limiting opportunities. The connection between development and literacy is clear. "No country has ever achieved continuous and rapid growth without achieving an adult literacy rate of at least 40 per cent" (Birdsall, Levine, & Ibrahim, 2005, p. 21). Poverty is reduced when education improves as communities use their knowledge to boost productivity, both locally and nationally. Without literacy, educational achievements are limited:

> "Sub-standard literacy in primary school rapidly marginalises students, resulting (chronologically) in disinterest, falling behind, anger and alienation, lowered participation and, sooner or later, dropping-out" (Higginson, 1997, p. 23).

Pacific Literacy Statistics

In recent years, literacy rates in the Pacific have risen, as shown in these results.

Pacific Literacy rates: 15-24 year-olds: women and men (percent)

	1990		2000		Male latest	Female latest	Total latest	
Cook Is			93.0	(1996)	99.0	99.0	99.0	(2001)
Fiji			93.0	(1996)	99.0	99.0	99.0	(1996)
FSM	71.0	(1994)	95.0		94.0	96.0	95.0	(2000)
Kiribati	92.0				96.0	97.0	97.0	(2005)
Marshall Is	74.0	(1989)	98.0	(1999)	98.0	98.0	98.0	(1999)
Nauru			99.0	(2002)	99.0	99.0	99.0	(2002)
Niue	95.0	(1992)			99.0	99.0	99.0	(2006)
Palau			91.0	(1995)	99.0	99.0	99.0	(2005)
PNG	60.6		61.7		64.0	59.0	62.0	(2000)
Samoa	96.0	(1991)			99.0	99.0	99.0	(2004)
Solomon Is	62.0	(1992)	85.0	(1999)	87.0	81.0	85.0	(1999)
Tokelau					99.0	99.0	99.0	(2006)

Tonga	98.8	(1986)	99.3	(1996)	98.0	99.0	99.0	(2006)
Tuvalu	95.0	(1991)	99.0	(2002)	99.0	99.0	99.0	(2002)
Vanuatu	34.0	(1989)	87.0	(1999)	88.0	86.0	87.0	(1999)

Source: Secretariat of the Pacific Community: Pacific Regional Information System (PRISM). Millennium Development Goals (MDGs) in the Pacific. Goal 2. Achieve universal primary education. <http://www.spc.int/prism/MDG/Indicators/G2T2a.xls>.

However, although these literacy rates typically show an upward trend, some doubt their validity. Many Pacific countries do not formally assess literacy, but base their figures on estimates, or a count of adults with four years or more of formal education. UNICEF (2011) state that numeracy and literacy rates are falling in a number of countries and are inaccurately reported with enrolment through to year 4 regarded as evidence of literacy acquisition. In addition, UNESCO (2008) purported that there is a general understanding that the relatively high reported literacy levels in the Pacific region may not reflect actual literacy levels and many students completing schools may lack basic literacy and numeracy skills. Thus, for reliability and consistency reasons, the UNESCO Institute for Statistics (UIS) has decided to no longer publish literacy data based on educational attainment proxies (UNESCO, 2008).

National pride is one possible explanation for inflated figures. Since the start of testing Pacific Island Literacy Levels (PILL), only three countries: Marshall Islands, Vanuatu and Solomon Islands have made the results public (Curtin & Vakaoti, 2012). Although reasons for non-disclosure are unclear however, in many Pacific Island nations, student performance on national examinations or PILL tests indicates a low level of learning. For example, in English language tests, several countries had over 40 per cent of students at risk for failure in Year 4, and by Year 6 the situation was worse (World Bank, 2007). The World Bank also suggests one third of Pacific students are at risk of failure in reading, writing and basic numeracy (World Bank, 2007). The issue applies for both English and vernacular languages (Curtin & Vakaoti, 2012), although generally local languages fare better.

With results like these, new measures of literacy seem appropriate. UNESCO's UIS prefers that literacy be measured through self-declaration, with household members reporting their own literacy achievements (UNESCO, 2008):

> "Census results overestimate many young people's actual ability to read as they are based on the respondent's answer given to a simple question. Special surveys provide more accurate information because they ask respondents to read a sentence in the language of their choice" (Curtin & Vakaoti, 2012, p. 19).

Even with this measure, under or over reporting is acknowledged. However, most Pacific governments do not have the resources for detailed assessment of literacy skills.

Samoa: A Case Study

There have been moves to acknowledge and address problems with literacy statistics. Many reports give high figures for literacy in Samoa, claiming literacy levels between 94-98 per cent. UNESCO's (2008) regional report on Pacific states 99 per cent of Samoan adults can read and write. However, a recent Government of Samoa report: *Millennium Development Goals* noted that although Samoa appeared on track overall for Millennial Goal 2 on universal primary education, they recognised deficiencies in educational quality and efficiency. Doubt was expressed about achieving MDG Indicator 2.3: Literacy rate for male and female 15-24 year-olds.

This comes after Samoa's most recent Population and Housing Census (2006) used a changed definition of literacy. It was found that 90.1% of 15-24 year olds could read, write and understand instructions in Samoan, but a lower percentage (75.1%) of adults could read, write and understand English. The lower English result is a problem when English is the language of instruction, and suggests difficulties for education at tertiary level which in the Pacific typically uses English. The report noted a reduction in a previously recognised gender gap for education of girls, noting improvements in literacy rates (92 % for Samoan and 81% for English). Adding to the confusion, more recent UN reports continue to quote high figures for Samoa (United Nations, 2012). Doubts over these figures also raise some uncertainty over other high Pacific literacy statistics. Are other Pacific countries in a good position to achieve the literacy target? To understand this question it is necessary to examine the relevant Millennium Development Goal.

Millennium Goals: Universal Primary Education (UPE)

Millennium Development Goals are an initiative from all member countries of the United Nations, as well as major international organisations. They arose from a desire to change the lives of the more than one billion people who live in extreme poverty, lacking safe water, proper nutrition and health care. UN Members committed to improving their situations targeting eight areas for improvement, aiming to achieve these goals by a deadline of 2015. Some goals have seen significant progress, particularly reductions in extreme poverty, improved access to drinkable water, and reductions in deaths from malaria and tuberculosis.

The second Millennium Goal is to achieve universal primary education (UPE) by 2015. Literacy is a key measurement: Target 2.3 monitors progress using literacy rates of 15-24 year-olds, women and men (United Nations, 2007). UNESCO define this as the "… percentage of the population 15–24 years old who can both read and write with understanding a short simple statement on everyday life. The definition of literacy sometimes extends to basic arithmetic and other life skills" (United Nations, 2003). There have been some improvements in gender parity in enrolments in primary school (United Nations, 2012) with 28 million more children are able to attend school since 1999. However, worldwide 75 million still miss out on education, 34 million boys and 41 million are girls (United Nations, 2007).

More recently, the United Nations has accepted that the overall educational goal of all children completing a full course of primary schooling cannot be

achieved by the 2015 deadline (United Nations, 2010). While the most significant educational disparities are in Africa, we are also struggling to achieve this goal in the Pacific, particularly in Papua New Guinea and Vanuatu. More children are falling through the gaps than some Pacific governments acknowledge (UNESCO, 2008). Pacific Education Ministers do acknowledge there have been only limited improvements in literacy over the last forty years, but a literacy conference planned for 2011 has not been held (Pacific Islands Forum Secretariat, 2012). If the reality does not reflect the glowing statistics, what went wrong? What is our path to the future? Rather than playing with figures, a focus on literacy at grass-roots level is required in order to give children the resources necessary for them to succeed. When education funding is limited, statistics that are artificially high deflect attention and divert priorities.

Current Pacific Approaches to Literacy

Parental preparation before a child enters the educational system is very important, and Pacific parents are encouraged to read regularly to children, boosting listening and comprehension. Although the approach varies under different educational ministries, typically the first years of schooling initiate basic literacy and numeracy skills, with a focus on vernacular languages. Students need to read at a level that allows them to continue their schooling as "reading is learned through reading" (McEwan, 2007, p. 97). A child who has achieved basic literacy has progressed from the process of *learning* to read, to a stage where they use reading to *learn*: the acquisition of new knowledge.

English language competency is essential for more advanced education. English becomes the language of instruction in most Pacific Islands schools at secondary level and for tertiary study. This is necessary as many textbooks are only available in English, due to a shortage of local information sources (Crowl, 2004). Limited reading levels and vocabulary in English limit future educational opportunities. The standard literacy intervention in many Pacific schools is the DEAR programme (Drop Everything And Read) promoting sustained silent reading during the school day. Success may be dependent on access to high-interest reading materials to stimulate continued interest in reading. There is little incentive if most reading choices are outdated materials of limited relevance.

Pacific Research

A common perception is that Pacific children reared in an oral tradition are not naturally attracted to reading. It is true that reading for pleasure is not widespread, and there is a limited culture of reading in many Pacific Island States. Crowl (2004) reported that although many Pacific Islanders are literate, their reading is often limited to school or religious activities. Elley and Manghubai's (1979) influential studies in Fiji more than thirty years ago show the value of providing children with access to reading materials. These studies are routinely covered in teacher-training programmes throughout the Pacific. In 1979 the *Research Project on Reading in Fiji* found that at the end of primary school one pupil in four was unable to read short stories in English. The authors predicted that half of each class would struggle with Class 7 textbooks. Fijian children were found to

be two years behind the equivalent age group in New Zealand, but one and a half years *ahead* of same age students in Tuvalu and Kiribati.

Later research by the same team involved a reading intervention programme to observe the effect of increased exposure to the target language. This measured improvements in general language competence and vocabulary. Commonly known as the "Book Flood," it involved 16 typical rural schools. English was the language of instruction and a second language for all students. Some had only been taught in English for 1-2 years. At the time, the schools had very few books or audio-visual materials. Two of three groups of children were provided with stimulating reading materials. After establishing current reading levels, a proportion of students were exposed to approximately 250 high interest, illustrated story books. There were two types of intervention: shared book experience, or sustained independent silent reading. In all cases, pupils were encouraged to read frequently. The third group acted as a control and did not receive additional resources. Results were compared with these similar 'control' schools. The study noted significant improvements in English and Social Studies. The study also found significant improvement in Science, Fijian and Mathematics (Elly & Manghubai, 1983). The team also reported observable growth in English vocabulary, word recognition and oral language, listening comprehension and adherence to grammatical structures. When compared with the control groups, a clear advantage was evident for either shared book or silent reading.

The authors do not speculate on reasons behind these improvements, and this is clearly an area for further research. However, it could be argued that it is due at least in part to active encouragement of reading, and positive role modeling (such as teachers reading to students). A wide vocabulary improves general comprehension as children find it easier to explore other areas of interest, and explanations are more easily understood. The same students were retested later and showed improvements in creative writing. The authors speculated that increased exposure to language meant children could "exploit their passive vocabulary and to produce fluent more interesting language of their own…" (Elley & Mangubhai,1981, p. 23). Results were confirmed even after taking into account other variables "even after home background factors were [removed], schools with large libraries produced good readers; schools without libraries did not…" (Elley & Mangubhai, 1981, p. 5). This suggests that Pacific children exposed to new and engaging reading materials can and *do* make time to read. Any perceived unwillingness may be more of a reflection on the quality of available reading materials than any culturally based rejection of reading.

Access to Reading Materials

Pacific students rely on class workbooks and textbooks. This is not serious if textbooks are plentiful, well written, current and appropriate for the Pacific environment. However, the limits of the local publishing industry and financial limitations in schools means many textbooks are outdated and inappropriate. This lack of textbooks and other reading materials is an issue for developing countries worldwide (UNESCO, 2005). The world is now more complex, and educational success requires access to wide ranging resources. Textbooks are an important introduction to school subjects. However, reliance on textbooks alone is no longer

sufficient to prepare adequately for the modern workplace. Textbooks work best as the starting place for study, a springboard from which students can explore class subjects in more depth. Libraries give children that opportunity.

With impressive findings from the "Book Flood", twenty-first century Pacific school libraries *should* be flourishing. Harold Howe, once United States Commissioner of Education said: "What a school thinks about its library is a measure of what it thinks about education." Most Pacific governments agree that literacy is an important contributor to a country's continuing development, and recognise this is a priority in education. However, there is only limited recognition of the role of libraries in providing access to information as "governments are eager to teach their people how to read and write as this will greatly assist in upgrading the level of the economy … then (do) not provide people with reading materials through libraries to … maintain this reading ability" (McFall-McCaffery, 2000, p. 1).

Access Only for the Wealthy

Advanced literacy contributes to a successful economy, but emerging readers need information to support their learning. When providing shelter and food on the table is a challenge, books are a low priority. In many Pacific countries this access is not equitably distributed, with uneven access to information, particularly in rural areas. Many Pacific households have no or few books beyond their standard religious text. Access to computers and the internet is even more limited.

Wealthy families can afford personal reading libraries made up of both print and electronic resources, either purchased or sent as gifts from overseas. A child wishing to explore teaching a subject beyond what is taught will miss out unless there is a good school or public library, or their family can pay for private access to information. An over-reliance on textbooks with limited access to other resources means that students cannot challenge what they have read, and may find it difficult to progress to the next level.

Libraries: Part of the Problem

Countries such as Fiji, Samoa and the Solomon Islands have increased the number of libraries in schools, but adequate resourcing continues to be a challenge. Libraries are still not present in all schools, and they all compete for funds with other educational needs. Many that exist have limited collections. If funding cuts are necessary, too often the library is an early casualty, and without a book budget, staffing is a common target for cuts. Instead of being a lifeline for poor students, some libraries have been converted to classrooms. They are often the responsibility of busy classroom teachers, and too often library doors are locked and the resources unavailable for some or all school hours.

New books are expensive, particularly with poor exchange rates for Pacific currencies, and there are additional shipping costs. Government duties further limit the number of books that can be purchased. In some countries such as Fiji, duties are also applied to donated books, and as a result its citizens miss out on useful donations to libraries. Ocean of Books, a private organisation based in New Zealand provides well selected books for schools in Niue, Samoa, Tonga,

Tuvalu, The Cook Islands, Vanuatu and Tokelau. However, they will not send books to countries where taxes are applied. Other organisations have similar policies.

Well selected donated books do have value. However, inappropriate books are another issue where Pacific school libraries are often stocked with older donated books of little relevance for Pacific children. This situation has not changed since Elley and Manghubai (1979) made these comments more than thirty years ago that "few schools in Fiji have a large stock of interesting reading books, designed for South Pacific children. Until there is an improvement in the availability of suitable books, we cannot expect children to become regular, interested and fluent readers" (p. 7). Fiction is the focus of many collections and this supports literacy, but current non-fiction resources are also needed to support the curriculum. Libraries often have limited or no budget for new items/activities. Even when there is funding, items may be selected centrally and distributed randomly. Access to alternative resources such as websites is often limited, as few libraries have computers or internet access.

A well-funded public library is a viable alternative to a school library, but these are not located in every community and are noticeably scarce in rural areas. Pacific public libraries are also often poorly resourced, mainly from donations, with few new materials. Due to poor funding, public libraries in the Pacific often have a membership fee. This makes it more difficult for poorer families to borrow library materials. Moreover, a perpetuating cycle has developed in that school administrators do not expect children to use library resources, so do not give funding priority to libraries. School children feel that libraries only have old, irrelevant and outdated books, so do not read them. Library shelves can only show old and outdated books, if there are no funds to obtain newer, more relevant books. With insufficient pressure from government, and a tendency to accept that only a small elite group will succeed, failure for the multitude becomes a self-fulfilling prophecy. Children who repeatedly skip or guess at unknown words experience delays in understanding.

Libraries: Part of the Solution

In the United States, higher-achieving students typically read more both inside and outside school. Any reading is good reading, to improve reading skills, acquire new information and build vocabulary. Books inform students as well as provide leisure reading. "Flexible" reading gives the child the power and independence to read whatever they want to read, whenever they want to read – both fiction and non-fiction. Those children who want to read, read longer and retain more information from reading. Access to information sources can be just as beneficial as owning them. Well-resourced school library collections provide cost-effective access for all students. Where poverty makes the purchase of books an expensive luxury, libraries can give all children the same opportunities as those in the wealthiest families.

Recent curriculum developments in the Pacific are promising, and in Fiji there is a move towards resource-based learning, also known as inquiry-based learning (Fiji Ministry of Education, 2007). This requires students to explore beyond their workbook, seeking resources to confirm information and identify

additional details. There are many benefits of this approach as students become more independent, learn how to investigate topics and to judge the value and accuracy of the information they find. But how effective is this approach without good libraries?

What Does a Good School Library Look Like?

In the Pacific there are few model school libraries. Locals often have very low expectations of services in a good school library, and are unaware that a good library can significantly impact on student achievement. The American Association of School Librarians (2011) argues that an effective school library should have full-time school library staff, with appropriate library qualifications. Access to the library should be available for students at any time during the school day and preferably before and after school hours. Frequent class visits are valuable as well as individual or small group visits which are available on demand for immediate and pressing information needs. These become effective "teachable moments", when students are more likely to listen to instructions and immediately apply what they have learnt, and remember the processes for future needs.

An effective library should include resources in different formats to accommodate different learning styles. Library collections should include books, dictionaries, encyclopedias, newspapers and magazines, audio-visual materials (and equipment to play them), as well as computers and access to the internet. Library resources should be appropriate for student needs and are current ideally encyclopedias should be less than 5 years old. Budgets should allow for the purchase of both print and electronic resources (American Association of School Librarians, 2011). Staff must work closely with teachers to identify useful resources before assignments are set, to ensure a positive learning experience. This environment is difficult to achieve when the library is an extra responsibility for teachers untrained in library work. Even where the library is their main task, staff members are often diverted into secretarial, class relieving or driving duties.

Most libraries in the Pacific do not meet the American Association of School Librarian (AASL) standards. Many do not have computers, and reference resources such as encyclopedias may be more than a decade old. Libraries without computers can provide an acceptable, but limited, service. Trained staff can show students how to use print resources such as encyclopedias and dictionaries, and explain content pages and indexes. Assignments can focus on topics covered well within the collection, typically topic overviews. Students can learn basic library skills by searching for authors and titles in the card catalogue (and by subject in larger libraries).

However, research-based activities become much easier with computer access. A computer catalogue makes items in the collections easier to find. Trained staff search for web resources and demonstrate these skills to students, allowing them to explore beyond the library and identify the best resources. Computerised libraries offer many more services to students.

Recommendations

Governments throughout the region want to achieve Millennium Goals by 2015, particularly Universal Primary Education and one of its key indicators of achieving adult literacy is more likely with well supported school libraries. It is recommended that to raise the profile of school libraries and educate the public on the fundamental importance of reading, Pacific schools could conduct localised "Book Flood" active research exercises on their own classes. Sharing these results with parents will demonstrate the benefits of reading, and show them the value of students reading at home as well as the classroom.

Education ministries need to endorse national and regional standards for school libraries. A good model to follow is *Standards for Fiji Libraries*, published by the Fiji Library Association. This gives minimum standards for schools, and includes a core requirement that libraries be provided in schools, and with open hours to match or exceed the school day. As library rooms and buildings are often taken for other needs, standards need a requirement for separate housing for library resources. The standards should also ensure that schools employ qualified library staff sufficient to support the size of school. Teachers need to be assigned library responsibilities in support of staff activities. To achieve this, they should have a sound knowledge of library practices, and adequate time away from teaching duties.

Library standards also recommend pupil-book ratios that specify the number of books and other educational resources necessary for an effective library. Both small and large school libraries need adequate resources to support the student body and teaching staff. Higher public-book ratios are necessary in areas with many low income families. This is particularly important in rural areas where there are limited or no public library facilities, making the school library the main source of information for students. Existing literacy initiatives such as the DEAR programme should be coordinated with library staff. Library students learn storytelling techniques and relevant programme activities to encourage reading. School administrations should provide adequate funding so that stimulating books are available for all participants.

Educational and library organisations can compile lists of suitable educational resources, based on local curriculum, and incorporating local resources where available, but supplemented with international materials. This requires working collectively with library associations representing regional school and public library staff to help identify the best local and international resources. Assistance can be obtained from library associations such as Fiji Library Association (FLA), Library Association of Samoa (LAS), Vanuatu Library Association (VLA), Tonga Library Association (TLA) and other national library associations. These book lists should be regularly reviewed for relevance and to add new resources. Resources must support all school age groups, and cover all teaching subjects. A variety of formats are necessary, including books (fiction and non-fiction), encyclopedias, newspapers and children's magazines, as well as electronic and online multimedia resources. Access to computers in school libraries is important, to build their searching skills in library catalogues, search engines and exploring educational websites.

Resources in local vernaculars are important. School and library associations can lobby the government for a National Language policy, requiring school and

public library collections to include a specified proportion of local material at various age levels. If supported by government funds, this policy will help to encourage local publishers to produce suitable material. Governments should provide funds for purchasing resources. Where possible, collaborative purchasing should be used to allow for bulk buying to reduce purchase prices and spread shipping costs. Higher allocations will be necessary for schools in low income areas.

Removal of government taxes and duties from all educational reading materials is also essential. This reduces costs to schools and will also encourage donations of relevant used books from the developed world. Pacific schools should use local funding sources to match government contributions. Small individual contributions of money or appropriate resources are always valuable, and can come from a number of sources, including local companies, 'Old' boys and girls, parents of current and previous parents, and retired principals and teachers. Governments need to actively encourage this with a higher proportion of resources allocated to committed schools making their own contributions.

National sources of support include fundraising organisations such as Rotary and Lions. International organisations which have previously provided funding support in this area in the Pacific Islands included the governments of Australia, China, European Community, Japan, New Zealand, Taiwan and the United Kingdom. International organisations such as American Library Association (ALA), Australian Library and Information Association (ALIA), International Federation of Library Associations (IFLA), and the Gates Foundation are all known to provide support in this area. Other supportive organisations include the Commonwealth Local Government Forum and private organisations such as Ocean of Books.

Conclusions

Well-resourced libraries unlock student potential, but it is not clear whether all Pacific school libraries have the key. If the Pacific Islands want to achieve Millennium Development Indicators on literacy by 2015, their literacy initiatives need to include libraries which are supported by adequate funding. Maintaining and improving reading skills require good access to reading materials, and this is most cost-effectively achieved through libraries. Improving the status and resourcing of libraries in the Pacific region need not be an expensive exercise, and has the potential to improve the educational outcomes for many years to come. Giving priority to the provision of appropriate, high quality educational resources gives Pacific students the chance to unlock their own destiny.

References

American Association of School Librarians (2011). AASL Advocacy Toolkit: The School Library: What Parents Should Know. American Library Association. 6 Dec. 2011. http://www.ala.org/ala/mgrps/divs/aasl/aaslissues/toolkits/whatparentsshould.cfm

American Library Association. *Presidential Committee on Information Literacy. Final Report.* Chicago: American Library Association, 1989.

"Beyond 2015: Sustainable Development Solutions Network." 9 Aug. 2012. *United Nations.* 24 Aug. 2012. http://www.un.org/millenniumgoals/beyond2015.shtml

Big6: Information and Technology Skills for Student Achievement. 2 Sep. 2010. http://www.big6.com/

Birdsall, N., Levine, R. & Ibrahim, A. (2005). *Towards Universal Primary Education: Investments, Incentives, and Institutions.* London: Earthscan. http://www.unmillenniumproject.org/reports/tf_education.htm

Connor, E (2007). *Evidence-Based Librarianship: Case Studies and Active Learning Exercises*. Chandos: Oxford.

Crowl, L. (2004). "Literacy, Book Publishing, and Civil Society." http://ips.cap.anu.edu.au/ssgm/papers/working_papers/Crowl02.pdf

Curtin, R. & Vakaoti, P. (2012). *State of Pacific Youth 2011.* UNICEF and Secretariat of the Pacific Community, Suva, Fiji: UNICEF. www.unicef.org/eapro/State_of_the_Pacific_Youth_Report_web.pdf

DODEA Pacific Literacy Project.*Department of Defense Education Activity.* 6 Feb. 2012. http://www.pac.dodea.edu/edservices/educationprograms/LiteracyProject.htm

Donahue, P.L., Voelkl K.E., Campbell, J.R., and J. Mazzeo. *NAEP 1998 Reading Report Card for the Nation and States.* Washington, D.C.: Department of Education, 1999.

Elley, W. B. (2000). The Potential of Book Floods for Raising Literacy Levels. *International Review of Education*, *46*(3/4), 233-255.

Elley, W. B. & Mangubhai, F. (1979). Research Project on Reading in Fiji." *Fiji English Teachers Journal.* 15 1979: 1-7.

------- . "The Impact of Reading on Second Language Learning." *Reading Research Quarterly* 19.1 (Fall 1983): 53-67.

-------. "The Long-Term Effects of a Book Flood on Children's Language Growth" *Directions: Journal of Educational Studies* 7 (1981): 15-24.

Fiji Ministry of Education (2007). *The Fiji Islands National Curriculum Framework: Education for a Better Future. (Web).* MOE. 2007. 14 May, 2012. http://www.paddle.usp.ac.fj/collect/paddle/index/assoc/fj33.dir/doc.pdf

Fong, E.C.R., Rainey, M., Prasad, H., Sitiveni, M. and Singh, N. (2003). *Standards for Fiji Libraries*. Suva: Fiji Library Association.

Government of Samoa (2012). *Millennium Development Goals: Second Progress Report 2010.* 2 May, 2012. http://www.mof.gov.ws/Portals/195/Services/Aid%20Coordination/mdg_report.pdf

Gurdayal, P. (2011). "Reading Enhances Children's Learning Ability." *Fiji Times Online*. July 14, 2011 http://www.fijitimes.com/story.aspx?id=175020

Hepworth, M. & Walton, G. (2009).. *Teaching Information Literacy for Inquiry-based Learning.* Chandos: Oxford.

Higginson, E. L. (1997). Reorienting Literacy and Basic Education towards Poverty Alleviation and the Empowerment of Quality of Life

Contribution to an APPEAL Study: Pacific Perspective. Apia, Western Samoa: *UNESCO*. http://unesdoc.unesco.org/images/0011/001129/112907eo.pdf

Howe, H (n.d). United States Commissioner of Education (1966 to 1968).

"Inequality Kills Regional Kids." *Fiji Times* 24 July 2009 http://www.fijitimes.com/story.aspx?id=126018

Institute of Education (1999). *Parents and Literacy Education* Literacy Education National Resource Persons BELS Workshop, Suva, Fiji.

McFall-McCaffery, J. T. (2000). The Struggle for Libraries: With Special Reference to Tonga and the Pacific Region. *Fiji Library Association Journal*. 43. & 44 (2000): 1-8. http://www.fla.org.fj/FLAJournal43&44e-edition.pdf

McEwan, E. K. (2007). *Raising Reading Achievement in Middle and High Schools: Five Simple-to-follow Strategies.* 2nd ed. Thousand Oaks, CA.: Corwin Press.

Merchant, G. (2008). "Early Reading Development." *Desirable Literacies: Approaches to Language & Literacy in the Early Years.* Thousand Oaks, CA.: Sage.

"Millennium Goals." *United Nations.* 6 Feb. 2012. http://www.un.org/millenniumgoals/

Pacific Islands Forum Secretariat (2012)."Forum Education Ministers' Meeting." PIFS(10)FEDMM.13(b). 13-14 Oct. 2010. *Pacific Islands Forum Secretariat.* 24 Aug. 2012. Port Moresby, PNG. <http://www.forumsec.org/resources/uploads/attachments/documents/2010FEDMM.13b_Paper.pdf>.

Philemon, O (2008). PNG Politicians to Face Call for More Support for Literacy during Book Week. *8 Aug.* 2008. Retrieved 17 March, 2011, from Radio New Zealand International http://www.rnzi.com/pages/news.php?op=read&id=41271

Rainey, M. D. (1999). Primary School Libraries in Fiji: A Research Report. *School Libraries Worldwide 5*(1), 41-48.

"School Libraries Work!" *Scholastic*. 2008. 6 Feb. 2012. <www2.scholastic.com/content/collateral_resources/.../slw3_2008.pdf>

SPC (2011). Pacific Islands population tops ten million. *PRISM: Statistics for Development.* Retrieved 16 June 2011 from http://www.spc.int/sdp/index.php?option=com_docman&task=doc_download&gid=346&Itemid=42&lang=en

The Millennium Development Goals Report 2012. June 2012. United Nations. 25 Aug. 2012. http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2012/English2012.pdf

The 4th R: Resource Based Learning: The Library Resource Centre in the School Curriculum. Saskatoon, Sask.: Saskatchewan Association of Educational Media Specialists, 1986.

UNESCO (1999). Pacific States Office. *Book Provision in the Pacific Islands.* Apia, Samoa; Suva, Fiji Islands: Institute of Pacific Studies, University of the South Pacific.

UNESCO (2005). "2005 Education for All Education for All: The Quality Imperative." *EFA Global Monitoring Report 2005*. 15 Apr. 2012. <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/efareport/reports/2005-quality/>

UNESCO (2006). "Understandings of Literacy." *Education for All: Global Monitoring Report.* Retrieved 6 Feb. 2012, from http://www.unesco.org/education/GMR2006/full/chapt6_eng.pdf>

UNESCO (2008). "Regional Overview: The Pacific." *EFA Global Monitoring Report 2008*. 7 Feb. 2012. http://unesdoc.unesco.org/images/0015/001572/157275E.pdf

UNESCO (2008). "2008 Education for All by 2015 Will we make it?" *EFA Global Monitoring Report 2008*. http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/efareport/reports/2008-mid-term-review/

UNESCO (2008). Education for All by 2015: Will We Make it? Regional Overview: The Pacific. UNESCO: EFA Global Monitoring Report. <unesdoc.unesco.org/images/0015/001572/157275e.pdf>

UNICEF (2011). Quality Education for All: Education (01) Funding Required. 21 Apr. 2011. www.unicef.org/pacificislands/Education_Funding_Needs.pdf

UNESCO (2012). Institute for Statistics. *Literacy.* 7 Feb. 2012. http://www.uis.unesco.org/Literacy/Pages/default.aspx

UNESCO (2012). Assessing and Monitoring Literacy and Numeracy." *UNESCO.* Office in Apia. 14 April, 2012. http://www.unesco.org/new/en/apia/education/literacy-and-numeracy/

United Nations (2003). *Indicators for Monitoring the Millennium Development Goals*. New York: United Nations, 2003. http://mdgs.un.org/unsd/mdg/Resources/Attach/Indicators/HandbookEnglish.pdf

United Nations (2007). Achieve Universal Primary Education: Target 2A. *United Nations Development Programme.* 24 Aug. 2012. <http://www.mdgmonitor.org/goal2.cfm>.

United Nations (2010). "Fact Sheet: GOAL 2: Achieve Universal Primary Education." DPI/2650 B. September 2010 24 Aug. 2012. *UN Department of Public Information*. <http://www.un.org/millenniumgoals/pdf/MDG_FS_2_EN.pdf>.

United Nations (2012). Concerted Global Efforts Have Led to Great Strides Against Extreme Poverty: Ban. *UN News Centre.* 8 Mar. 2012 http://www.un.org/apps/news/story.asp?NewsID=41488&Cr=mdg&Cr1=

United Nations (2012). Literacy rates of 15-24 years old, both sexes, percentage. *UNstats. Millennium Development Goal Indicators.* 25 Aug. 2012 http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=656

Vakaruru, N. (1984). "Improving the Teaching of English in Primary Schools in Fiji." *Directions: Journal of Educational Studies. 12*, 15-27 http://directions.usp.ac.fj/collect/direct/index/assoc/D769892.dir/doc.pdf

Wagner, G.A., and Bishop, D. (1993). A School/Community Library Book Flood Experiment in Western Samoa. *Directions: Journal of Educational Studies. 28*(15), 60-74. http://www.directions.usp.ac.fj/collect/direct/index/assoc/D770059.dir/doc.pdf

World Bank (2012). Current Trends, Future Opportunities: Human Development Outcomes in the Pacfic Islands: Initial Findings from Census, Survey and Budget Analysis. *Pacific Human Development Review.* 6 Feb. 2012. http://ddp-ext.worldbank.org/EdStats/KIRstu04.pdf

World Bank (2007). *Opportunities to Improve Social Services: Human Development in the Pacific Islands*. Human Development Sector Unit, East Asia and Pacific Region: World Bank. http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/PI_socservices_summary.pdf

Chapter 5: Dancing Feathers and Dreams of Green Frigate Birds: Rethinking Arts Education in Oceania—Exploring Art, Culture and Education for Sustainable Development in the Pacific Islands

Cresantia Frances Koya-Vaka'uta

Reclaiming Art Spaces

This chapter presents an argument for the reclaiming of Art Spaces within formal school curricula and non-formal education, on the basis of cultural expression as a valid and *"...distinct way of knowing"* (Sahasrabudhe 2005, p. 53), pertinent to the development of critical and creative thinking in the 21st century. In the context of *Arts Education in Oceania,* Linda Tuhiwai-Smith's seminal work provides some fundamental reasons for *re-thinking*. In her attempt to decolonize research, she advocates an Indigenist approach that resonates with the Art Education debate. These include the need for "indigenizing"*, "reclaiming", "remembering" and "story-telling"* (Tuhiwai-Smith, 1999).

Arts in Education (AiE)

In the pre-independence school curricula, Art Education emphasized western art forms and in Fiji for example, the emphasis was on realistic painting, papier-mâché, macramé and the like, under the general category of arts and crafts. Post-independence saw some change in Art Education with inclusion of pottery, weaving and print making using *tapa* cloth designs and techniques on paper. In many instances however, art and crafts were seen as 'soft' subjects allocated for students as a break from 'real' learning. In the best case scenario, students were often taught a variety of art forms offered on the basis of availability of teaching staff with an interest in the arts, and more significantly, school resources. The alternative was a bleak reality where art and craft classes were (and still are in many instances) absorbed by examinable subjects perceived to be more relevant,

usually determined by students' progress in other academic subjects. Internationally, the role of the Arts has gained recognition in terms of its contribution to holistic development, student self-esteem and spill-over positive approaches and outcomes in other subject areas. In the Pacific region, this realization has been slow and painful with the Arts sometimes being boxed into the Technical and Vocational (TVET) stream with an emphasis on non-academic students. Non-academic students are those perceived as non-performers in mainstream subject areas such as Math, English, Social Sciences and Science subjects. Students who are seen as academically weak are more likely to be encouraged to take up TVET (including the Arts) as an alternative post-school livelihood option

That having been said, the last decade has seen a renewed interest in revisiting conversations about the value of AiE. This is reflected in the *Culture and Education Strategy 2010,* which highlights the need for a strong, systematic approach to capacity building in culture and the arts in order to strengthen and further grow the creative and cultural industries within the wider cultural economic framework. The Culture and Education Strategy endorsed by Forum Education Ministers in 2010 at Papua New Guinea, highlights regional awareness of the critical role that culture and the arts plays in development. The longest standing AiE Curriculum in the islands is in Papua New Guinea, first included in the school curriculum almost four decades ago. The situation in the rest of the Pacific region however, is quite different with few island nations making the move towards AiE post-1990. In the 1990s, a Curriculum Development initiative in Solomon Islands saw *Creative Arts* Curriculum designed for Forms 1 to 5. In this package, the *artists-in-schools* approach engaged traditional masters in the teaching of cultural expressions through the arts. Ten years later, in the early 2000's Samoa began a similar move in the development of an AiE curriculum package for *Creative Art Studies* at primary level and at secondary school in the following genres; music, performing arts and visual arts.

Around the same time, the *Cook Islands Curriculum Framework 2002* presented the Arts as an opportunity for deeper and more meaningful learning. The new focus included dance, drama, music, media (film and video), literature, visual arts and cultural oratory and crafts. Similarly in Fiji, the Fiji Education Sector Programme (FESP) 2003 – 2009 resulted in the *Fiji Curriculum Framework 2007*. This framework also emphasizes the role of the arts highlighting the benefits of learning experiences in music, visual arts, and the performing arts (dance and theatre). A complete review of Art Education Syllabus for Classes 1 to 6 took place in 2010. In 2011, the Department of National Heritage, Culture and the Arts is currently working closely with experienced Art practitioners and curriculum developers from the region in collaboration with the Curriculum Development Unit in an attempt to *Mainstream Education for Sustainable Development through the Expressive Arts* with an emphasis on Culture and the Arts in Fiji.

Valuing AiE in Oceania

Arguably one of the current leading experts in AiE in the Pacific Islands, Teweiariki Teaero posits:

> Art is one of the defining characteristics of any culture or society, reflecting the mother culture and local environment. It is physically and ideologically shaped by these two factors. It follows that an ideal art criticism approach should also be firmly grounded in both the culture and local environment. The contents of any art curriculum ought, therefore, to include important aspects of society's art and material culture (1999, p. 8).

In the Pacific Islands, where art is valued for the most part on the basis of its cultural worth and functionality, there is a real need for advocacy and awareness about the benefits that AiE presents to formal and non-formal education and to social development and cohesion. Community awareness about the potential contribution of the arts to economic development through stimulation of the creative and cultural industries as well as for human and social growth is essential. Dinham (2011) presents ten reasons to value and prioritize AiE. These are adapted from the Australian context to suit island realities and needs:

1. Authentic arts programs are linked to a wide range of diverse skills useful for survival in the 21st century;
2. Students are introduced to alternative and new ways of thinking, seeing and experiencing;
3. Critical Functional Skills: Learning to act creatively, think flexibly and solve problems;
4. Mutual benefits of an authentic art program is intrinsic, and instrumental, personal and social;
5. Promotes cultural and cross cultural understanding, values connection and empathy for others;
6. Provides learning opportunities for self-expression and self-validation;
7. Engages students in ethical, aesthetic and communicative judgment;
8. Research indicates that students who engage in the arts out-perform other students linking the arts to positive learning in particular in mathematics and readings;
9. Benefits for disadvantaged and minority/marginalized students; and,
10. Positive effects on student's sustained interest in learning and schooling.

(Adapted from Dinham 2011, p. 19).

Equally crucial to the support for, and success of AiE, is the ability of curriculum designers to develop a meaningful package that is strongly grounded in culture. Engelhardt (2005), in linking the arts and culture, argues that the AiE approach also enables local cultural values and identity to have a central role in education. He also calls for the *artists-in-schools* approach to share their skills in traditional music, dance and crafts, and incorporate their artistic skills and knowledge into lessons in order to provide an opportunity for students to learn about the various art forms that their own culture produces and compare them with those produced elsewhere, and, in the process, learn about cultural values.

Further to this, Sheldon Shaeffer, Director UNESCO Bangkok writes in the foreword for *Educating for Creativity*: *Bringing the Arts and Culture into Asian Education*:

> The arts have the potential to play a distinct and unique role in bringing the ideals of quality education into practice. As a creative medium, the arts stimulate cognitive development, encourage innovative thinking and creativity, engender understanding of the importance of cultural diversity and reinforce behavior patterns underlying social tolerance (UNESCO, 2005, p. viii).

What is particularly critical to AiE initiatives is the purposeful collaboration between curriculum experts, art practitioners and cultural producers in the local community. This cannot be underscored as it would be very easy to defer to western frameworks of AiE which an external advisor or consultant in the Arts or in Curriculum often brings to the table. What is apparent is the need to *recognize and value* the contribution of indigenous art forms and the encouragement of contemporary expressions of these.

Teasdale and Teasdale (1992) for example, argue that "the arts in traditional Pacific societies are not compartmentalized, nor are they practiced in isolation from everyday life. Indeed, they are part of the everyday fabric of people's existence, expressing values and beliefs, and ensuring the stability of social relationships" (p. 5). What is evident is the need to contextualize AiE to ensure authentic learning experiences in the Arts. In support of this, Teaero (1999) also calls for a re-examination of art curricula in Oceania through a more appropriate and holistic art education programme; a more culturally relevant and more humanistic curriculum; and that it enables students to appreciate, enjoy and react appropriately to visual stimuli and artwork.

What Could Authentic AiE for Oceania Look Like? A Suggested Toolkit for Art Educators

1. Curriculum must be firmly grounded in the *foundations of education;* philosophy, psychology and sociology; bringing AiE into context of the islands.
2. Constructivism, which is the idea that prior knowledge of both students and teachers must form the basis on which to build new knowledge and skills.
3. Culture Gap, an idea presented by Angela Little (1995), who argues that the difference in expectations of the home culture and the school often leads to difficulties in learning and schooling. AiE must consider the lived experience and heritage art forms existent in diverse cultural contexts.
4. Multiple Intelligence (MI) theory, was first developed by Howard Gardiner in the 1980s, and is seen as critical to curriculum work. MI presents that each individual has very different skills and abilities that the school experience should develop in a holistic approach to learning. A holistic AiE package must consider these eight intelligence areas:

Linguistic intelligence (word-smart); Logical-Mathematical intelligence (number/reasoning-smart); Spatial intelligence (picture smart); Bodily-Kinesthetic intelligence (body-smart); Musical intelligence (music-smart); Interpersonal intelligence (people-smart); Intrapersonal intelligence (self-smart); Naturalistic intelligence (nature-smart).

5. AiE must be grounded in the 3 Rs of Education; relevance, readiness, resources; and, must include an additional component of sustainability.
6. The 3-Hs of Education are prioritized as curriculum guides and indicators; teaching for the *Head*, the *Heart* and the *Hand*. This brings the AiE experience through knowledge (cognitive learning through content); to values, beliefs and attitudes (understanding, expression) and finally to skills-for-life, livelihoods and life-long learning (through learning to do and hands on learning experiences and outcomes).
7. The content and teaching style (pedagogy) must look at *indigenous knowledge* and its contribution to positive and meaningful learning experiences as a core part of AiE in the region and link to issues such as Intellectual property, Copyright, Cultural mapping, Oceanic languages as endangered languages, Pacific history and the cultural and creative industries.

Critical Mass—An Endnote.

Critical mass is vital to realizing this dream where both heritage arts, and contemporary art forms, as derivatives and extensions of these cultural expressions, are valued as valid forms of cultural and creative endeavours. The future is clear, that "until the arts are given priority, educational and employment opportunities in these areas will remain unexploited and art will continue to meet academia in only colourful hallways stopping short at the classroom door" (Koya 2008, p. 20). In terms of systematic support systems and networks for the development of formal and non-formal education, it is envisaged that "with political will and foresight, funding, marketing, networking, and regional cooperation, perhaps this vision of hope for the arts and the essence of the Pacific's cultures, will become a major part of sustainable development initiatives for the region in the future" (Vaka'uta 2010, p. 170). In the final analysis, it is worth revisiting the man who is seen as the founding father of Contemporary Oceanic Art in the region who spoke at the Red Wave Exhibition Opening held at the James Harvey Gallery in Sydney 2000. We are not interested in imitating (western art) and asking our artists to perform dances for tourists. It is time to create things for ourselves, create and establish standards of excellence which match those of our ancestors (Cited in UNESCO 2003, p. 17).

References

Dinham, J. (2011). *Delivering Authentic Arts Education.* Melbourne, Australia: Cenage Learning Australia.

Engelhardt, R. (2005). The Role of the Arts in Improving the Quality of Education. In *Educating for Creativity: Bringing the Arts and Culture into Asian Education* (pp. 1-3). Bangkok: UNESCO.

Koya, C. F. (2008). Marking Time in Pacific Schools. In Koya, C. F and L. Tora (Eds.), *VASU Pacific Women of Power* (pp. 17-20). Suva Fiji: University of the South Pacific.

Little, A. (1995). Multigrade teaching: A review of research and practice, serial No. 12. *Overseas Development Administration*, London. Retrieved on March 25 from http://multigrade.ioe.ac.uk/fulltext/fulltextLittlereview.pdf

Sahasrabudhe, P. (2005). Design for Learning through the Arts: Mainstreaming Art Education in the School Curriculum, In *Educating for Creativity: Bringing the Arts and Culture into Asian Education* (pp. 47-54). UNESCO Bangkok: UNESCO.

Teaero, T. (1999). Art Criticism for Schools in Oceania. *Pacific Curriculum Network*, *8*(2), 7–11.

Teaero, T. (2002, November). *The Role of Indigenous Art, Culture and Knowledge in the Art Education Curricula at the Primary School level.* Paper presented at the UNESCO Regional Conference on Arts Education, Nadi, Fiji.

Teasdale, R.G. & Teasdale, J. (eds) (1992). *Voices in a seashell: Education, culture and identity.* Suva: UNESCO and Institute of Pacific Studies, University of the South Pacific.

Tuhiwai-Smith, L. (1999). *Decolonizing methodologies: Research and indigenous peoples*. London: Zed Books.

UNESCO (2005). *Educating for Creativity: Bringing the Arts and Culture into Asian Education*, Report of the Asian Regional Symposium on Arts Education, Measuring the Impact of Arts in Education, Hong Kong SAR, China 9 – 11 January 2004. UNESCO Bangkok.

Vaka'uta, L.E. (2010*).* Pacific Thought as Sustainable Capital: Exploring economic viability through the use of traditional and contemporary visual arts. In U. Nabobo, Koya, C. F & Teaero, T Eds.), *Education for Sustainable Development Vol. 1. Continuity and Survival in the Pacific* (pp. 162-170). Suva, Fiji: University of the South Pacific and the Asia-Pacific Centre for UNESCO.

Chapter 6: Games and Play that Children Engage in During Recess in Fiji Primary Schools

Jeremy Dorovolomo

> "If we abolish recess, the message we send is that we think children are inferior beings. After all, adults are very vocal about their need for breaks from routine, yet we expect children to stay 'on task' for the length of the school day!" (O'Brien, 2003, p. 162)

Introduction

This study aims to investigate the level of social interaction through the types of play and games that class four pupils in five primary schools in Suva, Fiji Islands are engaged in during recess. It also aims to compare male and female activities during recess. Five research assistants observed 168 class four pupils over three months, using scan sampling (Pellegrini, Kato, Blatchford, & Baines, 2002). A mixed method approach (Tashakkori & Teddlie, 1998) was utilized which involved the collection and analysis of both quantitative and qualitative data. Quantitative data relates to numbers while qualitative data deals with text and meaning (Dey, 1993). The quantitative data was collected through recess via observations and the qualitative data was gathered utilizing five focus groups. It was found that children are unsurprisingly very social during recess, in contrast to being solitary or parallel to each other. The types of play and activities prevalent in each school are varied and so are the reasons. One school, for example, showed a high number of children engaged in ball games during recess, which was seen as a reflection of their high involvement in sports, and also the fact that they were currently the dominant sports school in Suva. On the other hand, stricter rules on active play during recess influenced the high incidence of non-active conversation, sedentary and verbal play in another school. It was also found that the way boys play is more active during recess. Boys are significantly engaged in vigorous and fantasy play, and girls are involved more in conversation. Not only that, this also

indicates that boys use recess as opportunity to be engaged in vigorous play, while girls may utilize it as opportunity to socialize with their friends.

Literature Review

In Australia and the United Kingdom, school children are increasingly restricted in their freedom to interact and play in relatively unsupervised settings such as during recess or break time (Chaille, 2001). Chaille also states that issues concerning the use of time in school as well as playground safety are reasons that policymakers give to curtail such activity. This is to the point where in many Australian schools today there is no recess, and the traditional lunch hour has been reduced to 45-50 minutes (Evans, 2003). This trend is also occurring in the United States. School officials are eliminating scheduled recess periods to gain additional instruction time. With an expanding academic curriculum that needs to find space for new learning foci (Boyle, Marshall, & Robeson, 2003) all within a society that is obsessed with standardized testing, recess is endangered or even eliminated (Waite-Stupiansky & Findlay, 2001).

According to Zygmunt-Fillwalk and Bilello (2005) as many as 40 per cent of school districts throughout the United States are reducing or deleting recess periods. This is done to cater for an increasing climate of school accountability and an intense focus on strictly cognitive performance. School administrators across Philadelphia, for example, have labeled recess as ‘a waste of time’, and that children as young as nine are considered to be ‘too old to play’ (Beresin, 2002). This is contrary to most schools in Asian countries where children receive more opportunities for free play or recess during the school day than their American peers (Roth, Brooks-Gunn, Linver, and Hofferth, 2003). Many schools in the world, nevertheless, have eliminated recess to gain more ‘seat time’ to accommodate an orientation toward accountability (Pellegrini and Bohn, 2005; Teri, 1996). It is difficult to understand this push for more ‘seat time’ when 68 per cent or more of school time is already spent on ‘core’ academic subjects for high stakes exams (Blackwell, 2004; Roth et al., 2003). All these reductions and eliminations of recess are a result of an underestimation of the benefits of recess (Chaille, 2001). Recess may be understood and implemented variedly from country to country and from school to school. However, administrators and educators have an obligation to present evidence in support of reducing or eliminating recess. Doing otherwise has been described as the squandering of the trust and resources of children, families, and taxpayers (Pellegrini & Bohn, 2005). Thus, Blackwell (2004) asks an important question: what are the hidden costs to children, youth, and educators when recess is missing from the school success formula? Having investigated recess periods from schools around the world, Blackwell probes this question for all who have a stake in schools.

Recess is said to provide a break allowing pupils to concentrate more fully on their lessons (Roth et al., 2003). Further to this, massed versus distributed practice suggests that strategically placing breaks during and between cognitively demanding tasks does increase children’s attention and may increase learning. Children’s attention are greater on days they have recess, meaning that recess can have a major role in fostering attention skills in children (Evans & Pellegrini, 1997; Zygmunt-Fillwalk & Bilello, 2005). This phenomenon is known as task

spacing or distributed effort (Chaille, 2001). Recess adds to the overall quality of children's school experience and provides an important context that allows them to monitor views of themselves, which in turn may provide the impetus that prompts them to modify their self-concepts in a more realistic direction (Boulton, 2005). Recess is also said to enable children to develop and experiment with social strategies such as sharing, cooperation, problem solving, conflict resolution, and self-control, all skills necessary for successful living (Leff & Lakin, 2005; Zygmunt-Fillwalk & Bilello, 2005). Recess can maximize children's cognitive performance (Ernst, 2003; Pellegrini & Bohn, 2005; Waite-Stupiansky & Findlay, 2001), assist adjustment to school (Pellegrini & Bohn, 2005), encourage healthy peer interaction (Evans, 2003), and provide social skill intervention opportunities for children with behavioral problems (Butcher, 1999).

On the other hand, recess can be a period in which children may suffer peer rejection or lag in their social development as a result of ineffective play behaviors (Doll & Murphy, 1996; Wohlwend, 2005). Furthermore, safety is a large issue in recess (Peterson, 2002), with seventy-nine per cent of all playground accidents in America being due to falls and most of these injuries happening to the five to nine year age group. Improper use of equipment and the lack of adult supervision accounts for forty-four per cent of the injuries (Peterson, 2002). Beth and Patrick (1996) describe two classes of recess problem, (i) peer conflict and (ii) exclusion. Withdrawal and exclusion from recess activities occurs due to lack of skill, disability, cultural difference, or cultural expectations. Children are also observed avoiding involvement if the likely outcome of their engagement will be ridicule or teasing (Sherman, 1999; Watkinson, Dwyer, & Nielson, 2005).

Nevertheless, breaktime may provide the only opportunities for play for many children during the day (Evans & Pellegrini, 1997). Recess may be the only time during the school day that children can interact, determine, and organize activities on their own terms without adult control and directions (Chaille, 2001; Waite-Stupiansky & Findlay, 2001). Vanished are the days where recess duty involved an occasional glance out of the staffroom. Today, schools are now required to patrol and basically forced into a 'policing' role. Accidents and injuries are no longer seen as part of the rough and tumble of active play. Children should be given some time and space to themselves (Evans, 2003). It is suggested that recess be for the children to devise their own games and activities with minimal intervention from supervising adults. Chaille (2001) advocates that consistent supervision is necessary to teach and engage children in games, help resolve conflicts, and assist them to organize their own play. However, Evans (2003) has a lot of reservations about adults organizing activities for children during recess and lunch breaks. These organized activities could be easily viewed as a de-facto physical education program if adult-led recess activities occur.

Recess and physical education should not be considered as the same. The teacher is still accountable for student learning in the physical education class. It is clearly suggested that recess and free play must not be inserted into the physical education curriculum (Ernst, 2003; Sanders, 2000). However, Parker (2004) reiterates that recess and physical education may be separate but often relegated to 'fillers' as opposed to primary needs. These times need to be valued, special and seen as imperative to the healthy development of the children. It is in

the school's best interest to support recess to enhance children's love for learning and physical activity. Administrators and parents should be reminded that recess is not a time where children 'wander aimlessly' but rather a time to foster a physically active lifestyle (Jones, 2005). In many cases, recess is the only opportunity for children to be active because physical education is not taught (Sherman, 1999). Furthermore, there is relation between a well planned physical education and sport program and an active playground, because if children are exposed to the use of ropes, hoops, bats, balls, and so on, during the physical education class, they will be more likely to do so during recess (Evans, 2003). Therefore, it is important for children to be given recess and allowed to play. Children have played throughout history and in all cultures. Play is defined as pleasurable, self-motivated, non-goal-directed, and spontaneous behavior, free from adult-imposed rules (Teri, 1996). Activities controlled by adults or machines such as television or video games are non-play (Stork, 2005).

Children's right to play must be defended and preserved by all adults (Evans, 2003; Zygmunt-Fillwalk & Billelo, 2005). The *United Nations Declaration of the Rights of the Child* states that "The child shall have full opportunity for play and recreation which should be directed to the same purposes as education; society and the public authorities shall endeavor to promote the enjoyment of this right" (O'Brien, 2003, p.2). Recess is a good venue to promote the child's right to play. Outdoor recess does not cost anything and has powerful incentive in the stimulation of learning, but is seldom used as reward (Geiger, 1996). Many schools do the opposite, by denying recess to the child as punishment rather than as reward (Blackwell, 2004). Thus, the issue is let the recess bells ring again, along with the laughter of children in the playground (Chaille, 2001).

Opportunities for recess in spacious playground settings equipped with apparatus to encourage exercise – basketball hoops, four-square grids, balls, and so forth would help to moderate children's weight problems (Pellegrini & Bohn, 2005). In a study of two primary schools by Stratton and Leonard (2002) they conclude that playground markings prompted significant increases in the energy expenditure of both boys and girls during recess. Physical activity can be promoted in schools by making equipment and facilities readily available during recess and lunch breaks and encouraging their use. Moreover, there is need to roster equipment and facilities to provide equal access between boys, girls, and across the age groups (Okely, Patterson, & Booth, 1998). In fact, when planning for new schools recess should be a major priority by thinking of the space and building plans (Blackwell, 2004). Many schools, however, have taken out swings, seesaws and roundabouts citing non-compliance to safety standards and that they are the causes of accidents and injuries. This has implications for the amount and type of physical activities children do. Children love to play with equipment that they can change, move and manipulate. Therefore, children should be allowed to participate in active games during recess because it is always a delight to see pupils enjoy physical activity (Evans, 2003).

Games are guided by explicit rules that are set in advance and violation of these rules usually results in some form of sanction, not re-negotiated (Pellegrini, Kato, Blatchford, & Baines, 2002). Giving children time out of the classroom during recess allows them to develop games, rules, and to be part of activities of their own creation (Zygmunt-Fillwalk & Bilello, 2005). Recess games increase

children's aerobic endurance, muscular strength, coordination, and controls excess weight gain and related health problems (Waite-Stupiansky & Findlay, 2001). However, boys play more games than girls, especially chase and ball games, while girls play more verbal games. The variety of boys' games increases as they progress through the classes (Pellegrini et al., 2002). As children increase in age, ball games increase and chase games decrease during recess (Blatchford, Baines, & Pellegrini, 2003; Evans, 2003). Boys tend to play more ball games than girls do (Ridgers & Stratton, 2005). Twarek and George (1994) conducted a study with four hundred and two elementary school pupils and concluded that girls' choices of recess activities were more limited when compared to boys. According to Dahmes (1993), however, during recess boys' games narrowed, instead of increasing, as they aged because they concentrated more on organized games, while the activity range for girls remained constant.

By middle childhood, Boulton (2005) states that rule games benefited boys more than girls. It is the norm for boys to devote lots of time on rule-governed games during recess. Boys' game networks are also larger than those of girls' (Evans, 2003). Boys also engage in more vigorous activities and exercise during recess than girls. In a study of 228 boys and girls, boys were involved in more moderate to vigorous physical activities (MVPA) than girls are (Ridgers, Stratton, & Fairclough, 2005). A further study by Ridgers and Stratton (2005), found boys engaged in higher levels of MVPA than girls during recess. However, in a study of 22 school children in third and fourth grade, Mota, Silva, Santos, Ribeiro, Oliveira, and Duarte (2005) found that girls were involved in more MVPA than boys, thus, recess is a valuable setting to promote physical activity for girls. Boyle, Marshall, and Robeson (2003) added that boys were more active but most girls are also physically active at recess.

Recess is clearly an important opportunity for children to be physically active (Waite-Stupiansky & Findlay, 2001). It can account for about a third of daily recommendations for physical activity in primary school children (Ridgers & Stratton, 2005). Not only that, the context of games such as tag and soccer during recess, does develop peer relationships and social skills in children (Pellegrini & Bohn, 2005). Blatchford, Baines, and Pellegrini (2003) found that there was little segregation on playgrounds and games. This can have a positive role in social relations between pupils of varying ethnicity. Epstein (1999), however, reviewed that Blatchford avoided any real discussion of power relations, for example, in talking about pupils' accounts of racism at breaktime. O'Brien (2003) as a parent volunteer during recess at her child's school for a year noted the importance of outdoor play during recess for providing an opportunity to speak and act unfettered by adult expectations. She recommends that schools provide an environment that would allow high quality recess experiences for children. High quality recess experiences are those in which children of all ages have a high degree of choice in physical activity at recess (Chaille, 2001). Play and games during recess, like nutrition, are vital to develop the potential of all children (Stork, 2005). Recess has not traditionally been seen as an achievement setting. It has increasingly been seen as taking away time for achievement activities and break from schoolwork. However, recess is an achievement context (Watkinson, Dwyer, & Nielson, 2005). Families, schools and other institutions should rearrange their attitudes and priorities about play, games and recess (Frost, 1998),

because recess is the fourth "R" helping children learn the other three (Waite-Stupiansky & Findlay, 2001).

Piaget devised a theory of the origins and development of play in children. Play activities range from primitive sensorimotor to highly complex social games and are categorized into stages that correspond to children's levels of intellectual development (Chaille & Silvern, 1996). These stages are sensorimotor practice/play, symbolic play, play activities with rules, and constructive and creative play. The first, practice play, has its sole purpose of being the pleasure of function. It stresses the importance of pleasure over the learning of a new behavior. Children play jump rope, attempting to gain more control as they exercise their ability. They may ask such questions: Can I jump longer? Can I jump farther? Can I jump two ropes going in different directions? (Chaille & Silvern, 1996). Or a child who had acquired the skill of jumping may find jumping back and forth over a stream pleasurable. The child's purpose is the sole pleasure derived 'from jumping'. Such play activity repeated becomes sensorimotor practice or practice play (Yawkey, 1973).

In symbolic play, there is representation of an object that is not presently observed (Yawkey, 1973). Symbolic in contrast to practice play is where images or symbols result from body adjustments to an object in its absence. For example, a child who has acquired a driving schema, having seen his/her mother drive a car, reproduces these actions out of context in a play activity. The child may reproduce these driving actions on a miniature toy truck or other objects. With symbolic play, there is pretence and make believe. Repetition and organization of thought in terms of symbols and images already mastered is operationalized through imaginative play. As the child continues to engage in symbolic play and receives more experience from the environment, it becomes better organized and elaborate (Yawkey, 1973).

In the next category of play, according to Piaget, there are play activities with rules (Yawkey, 1973). Play activities with rules reflect a high level of operational intelligence. Children at this stage increasingly engage in play activities with rules, such as games with marbles. They are ludic or playful activities of socialized beings. Violations of play activities with rules carry sanctions. These rules are tailor-made for a purpose and fit a specific play activity. Piaget also recognizes constructive and creative play in his classification of play activities. Creative play occupies a position in between play and intelligent work (Yawkey, 1973). For example, children might use material to represent reality, by carving a piece of wood to represent a boat, rather than simply taking a block of wood and pretending it is a boat (Chaille & Silvern, 1996).

Rooted in the Piagetian theory is that the child actively constructs knowledge of the world (McLachlan-Smith, 1991). The child's intercourse with the physical world provides the main constraint and contributions to the development of intelligence. The child learns as he/she acts upon objects in space and time. The Piagetian theory recognizes that any analysis of human knowledge and intelligence must begin with consideration of motor activity and practical problem solving. Another of Piaget's important educational messages is that children have to be active and constructive in order to develop their understanding of the world (McLachlan-Smith, 1991).

The research questions of this study are:

- What are the social interaction levels of class four primary school children during recess in Fiji?
- What are the prevalent types of play and games in the sampled schools during recess?
- Are their differences in the types of activity boys and girls are engaged in during recess?

Methodology

This study incorporates a mixed method design, combining both quantitative and qualitative approaches. The type of mixed method approach this investigation uses is the *dominant-less dominant study* (Tashakkori & Teddlie, 1998), where the quantitative approach is the dominant paradigm used, while a minor component of the study is drawn qualitatively. Specifically, data was entered into the Statistical Package for the Social Sciences (SPSS v17) and analyzed through descriptive analysis and the Kruskal-Wallis test. Qualitative data was drawn from focus groups and used to support and help explain quantitative results. This is congruent to what Barbour (2007) stresses by saying that focus groups can be used in mixed method approaches to illuminate results and furnish explanations following a quantitative phase.

Methods

Direct Observations

Direct observations of pupils during recess were conducted. According to Leff and Lakin (2005) direct observations of playground behaviors tend to be more objective than peer, teacher, or parent reports. Scan sampling (Pellegrini et al., 2002) was used to observe pupils during recess and break times. Scan sampling involves rapidly scanning a group of subjects. The activities are recorded at pre-selected moments, for example, every minute over 30 minutes. This is as opposed to focal sampling where observation is focused on one subject at a time (Pellegrini et al., 2002). Scan sampling observation guidelines given to observers were:

- The observers were classroom teachers. They were asked to census an entire group once at regular intervals and to record the behavior of each individual whatever the individual was doing at the moment of scan.
- All of the children in anyone classroom group were scanned within the minute.
- The group was scanned every minute for ten minutes, followed by a rest for two minutes, and then scanning started again, scanning every minute for ten minutes. This was again followed by a rest for two minutes and then the whole process resumed until thirty minutes was completed. The scanning used thirty minutes of the recess.

- A tally was put against each child for the *Level of Social Interaction* and the *Type of Activity* that they were engaged in during the time, for each minute. This was started with the pupil at the top of the list and then proceeding to the end, with the aim to complete this in one minute, and to start again at the top. This was kept going until the thirty minutes expired.
- At the bottom of the observation sheet comments and/or descriptions were written about what the children did or about individuals or groups of students for the day. This was completed after the break or another time during the day.
- Class teachers were asked to observe pupils of their class alone. The children could be playing or sitting with others from another class but the recordings needed to be of their own pupils.
- One observation sheet was used each day.
- The class teachers were informed of the recording rules in order to synchronize observers' observations and the recording rules and procedures.
- Each was asked to use a stopwatch to time the process accurately.

Five primary schools at Suva were purposely sampled, a Muslim, Catholic, Hindu, Fijian, and a parent-controlled school. One of the grade four classes from each of these schools was observed. The class teachers were the observers during recess and breaks. There are two break times; the first one is usually shorter than the lunch break. Combined minutes for the two breaks ranged from 45 minutes to 85 minutes in the sampled schools. The 30 minutes observation time was decided by consensus to cater for the schools with the shorter break times. There were two male and three female teachers who were the observers. Formal permission to conduct the research was taken from the Fiji Ministry of Education. Access to the sampled schools was done via a letter, which was followed up with a formal visit to see the Head teachers. They were all very helpful and quickly picked a class four teacher to work with the researcher. The purpose of the research and implications of findings for the school were explained. Parents of each child were sent an information sheet and signed consent was received from all parents of observed children. All children are obviously under 18 years of age, which requires parents to give consent. Children, however, understood the research project as their class teachers, who are the recess observers, explained the project to them. Pupils understood that they will not be affected in any way as they can simply go about their recess activities as normal.

A half-day workshop was held to familiarize observers with the aims of the research project and particularly their role as observers. Going through the standard observation checklist was an important task during this workshop to ensure that each observer understood the coding. The length of observation time was planned for over three months for every single recess during weekdays. This is a long time to be spending recess time observing so it is crucial that they knew what to do. The first week was spent trying out the observation technique at their various schools. The whole group met at the end of the week to discuss observers' experiences and observation sheets. Surprisingly, only one of the observers recorded correctly. Thus, the researcher went through the observation

process again. We also found a fault in the observation sheet. A column for 'games with material' was not included so we had to reprint observation sheets. The observation style was consistent in the second week so observers continued to the end of the scheduled time. Observers were very busy during recess because children did not necessarily stay in the one area during the time. Observers and the researcher met regularly to discuss experiences and progress. The researcher also collected the weekly observations from each research assistant. Observation data on students who missed classes consistently were excluded from analysis. Sometimes the observers were absent and then covered missed days by doing extra ones other than those scheduled.

The standard observation list contains the types of activities and the levels of social interaction children engage in. These definitions were incorporated from Blatchford *et al*. (2003, pp. 488-489):

Level of Social Interaction

Children were coded as being in one of three states of social interaction:

1. Solitary – the target child is not interacting or in a parallel activity with other pupils, irrespective of proximity, e.g. standing on the edge of a game watching or sitting by him/herself at a place.
2. Parallel – the target child is situated in close proximity to another child and they are both doing the same activity but are not talking or interacting in a socially organized activity.
3. Social – the target child is engaged in physical and/or social interaction or involved in a socially organized game or activity (includes children doing parallel activities but also talking).

Type of Activity

Children were coded as engaged in one of the following activities:

1. Conversation – the target child is involved only in conversation and when asked what they are doing they say just 'talking' or something to the same effect.
2. Vigorous play – the target child is engaged in vigorous activity, (e.g. cartwheels, spinning, running).
3. Sedentary play – the target child is engaged in non-vigorous activity (e.g. drawing, reading, playing with cars).
4. Fantasy play – the target child is engaged in imaginative/role play. This supersedes vigorous/sedentary play (e.g. mums and dads, families, cops and robbers).
5. Chasing/catching/seeking – the target child is involved in a game in which pupils run after or look for others with the aim of touching (physically or with an object usually a ball, thus this supersedes ball games), catching (no object involved), or just seeing them.

6. Racing – the individual is involved in a racing competition with others the aim being to win. They may compete together, as pairs, etc. or time each other.
7. Ball games – the target child is involved in a game within which players use a ball, including pig in the middle, throwing and catching, tennis, soccer, basketball and other derived games, e.g. kickball.
8. Jump skipping – the target child is involved in a game in which individuals skip with a rope each or where a rope is shared.
9. Games with materials – the target child is involved in other games with rules that use materials (e.g. throwing hoops over pegs, board games, Frisbee).
10. (10) Verbal games – the target individual is involved in an activity in which children sing or say verbal rhymes [e.g. dipping ('eanie meanie minie mo'), actions and rhymes or singing and dancing, unless this is accompanied by another category, e,g. skipping, when it is superseded].
11. Other – the target individual is involved in activities that are not covered by non-games or games above (e.g. musical statue, please Mr. Crocodile, hopscotch).
12. Nothing – no activity/game or play.

Focus Group

Five focus group discussions were held during the course of the study. Focus groups have the capacity to reflect issues and concerns salient to participants rather than merely those of the researcher (Barbour, 2007). Participants in the focus groups were the five observers of the children's recess activity. These focus group discussions were all held at the researcher's workplace staff room, with discussion time varying from forty minutes to an hour. These focus group discussions were all recorded, by permission, and transcribed by the researcher. By transcribing the discussions, it pays dividends in terms of being familiar with the data. Light refreshment was provided in all focus group sessions. Barbour (2007) also emphasizes the worth of considering refreshments as a way of showing gratitude to participants and encouraging a relaxed atmosphere. Barbour suggests that participants give their time to be in your focus group, therefore, it is good to provide light refreshment. The researcher organized simple coffee and tea for every single focus group discussion. These observers or class teachers gave their time after school in order to come to these focus groups. According to Bogdan and Biklen (2007) the focus group fosters talk among participants and stimulates discussions from multiple perspectives. The researcher provided the topics for discussion at each session. All discussions revolved around recess, their experiences and observations. Cohen, Manion, and Morrison (2007) advise that the researcher should not to be too directive, but to be open-ended and avoid veering off the point.

Results

The SPSS v.17 was used to analyze quantitative data. There are 168 class four pupils who participated in the study, with 47 per cent (n=79) boys and 53 per cent

(*n*=89*)* girls. Of the five participating schools, School A has 19.6 per cent (*n*= 33) of the pupils, School B 16.1 per cent (*n*=27), School C 24.4 per cent (*n*= 41), School D 25.6 per cent (*n*=43) and School E 14.3 per cent (*n*=24) of the pupils. The difference in numbers from schools is the difference in enrolment numbers of each of them.

Most of class four pupils (n = 102) who participated were 9 years of age (60.7%). Pupils who are 10 years of age make up 23.8 per cent (*n*=40), 8 years olds 12.5 per cent (*n*=21), 12 years old 1.8 per cent (*n*=3) and 11 year olds 1.2 per cent (*n*=2). Of the 168 class four pupils, 64.3 per cent (*n*=108) were Fijians, 18.5 per cent (*n*=31) Indians, 8.9 per cent (*n*=15) are Rotuman, Rabian and Part-Europeans, and others 8.3 per cent (*n*=14) which included Sri Lankan, Tongan, Tuvaluan, Solomon Islander, Chinese and Koreans. Fijians are the indigenous population of Fiji. Fiji Indians are descendants of Indians who were brought as indentured labourers by British colonizers between 1879 to 1916 and make up a significant part of the Fiji Islands population. *Rotumans* are a minority, polynesian group from an island in the outskirts of Fiji. *Rabians* are from Kiribati but resettled at Rabi Island in Fiji by British colonizers due to phosphate mining on their island of *Banaba.* In the study, there were also 83.3 per cent (*n*=140) Christians, 12.5 per cent (*n*=21) Muslims and 4.2 per cent (*n*=7) Hindus.

Descriptive Analysis

Table 3: Level of Social Interaction (Overall)

Category of Behaviour	*Mean*	*SD (Standard Deviation)*
Social	284.43	245.10
Solitary	71.80	45.53
Parallel	51.56	44.24

Overall, when combining all five schools for 'Level of Social Interaction', the mean for 'social' 284.43 (SD = 245.10) is far greater than the mean for 'solitary' 71.80 (SD = 45.53) and 'parallel' 51.56 (SD= 44.24). Most pupils are being social during recess.

Table 4: Level of Social Interaction (Schools)

School	*Category of Behavior*	*Mean*	*SD*
A	Social	469.58	98.15
	Parallel	54.85	37.39
	Solitary	25.12	25.71
B	Social	729.93	68.15
	Parallel	6.00	5.49
	Solitary	85.33	28.88
C	Social	118.10	26.32
	Parallel	39.80	14.58
	Solitary	116.34	19.23
D	Social	108.98	20.62
	Parallel	112.12	11.56
	Solitary	92.21	15.76

E	Social	127.00	26.27
	Parallel	9.88	15.89
	Solitary	8.08	14.09

For 'Level of Social Interaction', the mean for all schools in 'social' is the highest as opposed to being 'parallel' or 'solitary', School A 469.58 (SD = 98.15); School B 729.93 (SD = 68.15); School C 118.10 (SD = 26.32); School D 108.98 (20.62) and School E 127.00 (SD = 26.27).

However, there are more children in School D 112.12 (SD = 11.56) that are 'parallel' to each other than School A 54.85 (SD = 37.39), School B 6.00 (SD = 5.49), School C 39.80 (SD = 14.58) and School E 9.88 (SD = 15.89).

On the other hand, there are more children being 'solitary' at School C 116.34 (SD = 19.23) compared to School A 25.12 (SD = 25.71), School B 85.33 (SD = 28.88), School D 92.21 (SD = 15.76) and School E 8.08 (SD = 14.09).

Table 5: Type of Activity (Overall)

Category of Behaviour	*Mean*	*SD*
Sedentary play	85.35	92.38
Conversation	76.34	82.45
Nothing	53.48	46.42
Games with material	42.10	29.35
Verbal games	31.97	52.80
Chasing, catching and seeking	29.15	34.36
Other	26.80	30.57
Ball games	25.90	30.73
Fantasy play	13.13	22.30
Vigorous play	11.02	27.39
Racing	6.74	10.80
Jumping and skipping	5.30	8.19

Overall, for 'Type of Activity' in the schools, 'sedentary play' with a mean of 85.35 (SD = 92.38) is more than 'conversation' 76.34 (SD = 82.45); 'nothing' 53.48 (SD = 46.42); 'games with material' 42.10 (SD = 29.35); and 'verbal games' 31.97 (SD = 52.80). In a combined data, children are mostly involved in sedentary play, conversation, and doing nothing. These are activities involving no physical activity. Activities that involve physical exertion are at the lower end of the table.

Table 6: Type of Activity (Sedentary play)

School	*Mean*	*SD*
A	117.91	7.40
B	266.63	52.46
C	26.95	11.12
D	3.05	4.07
E	13.42	21.92

There is high 'sedentary play' at School B 266.63 (SD = 52.46), compared to School A 117.91 (SD = 7.40), School C 26.95 (SD = 11.12), School D 42.37 (SD = 18.24), and School E 13.42 (SD = 21.92).

Table 7: Type of Activity (Conversation)

School	*Mean*	*SD*
A	101.64	51.92
B	139.52	28.63
C	10.51	4.93
D	57.35	9.07
E	12.13	8.91

There is also more 'conversation' at School B with a mean of 232.70 (SD = 51.59) than School A 101.64 (SD = 51.92), School C 10.51 (SD = 4.93), School D 57.35 (SD = 9.07) and School E 12.13 (8.91).

Table 8: Type of Activity (Verbal games)

School	*Mean*	*SD*
A	43.12	29.44
B	139.52	28.63
C	1.17	1.52
D	3.05	4.07
E	.08	.41

In addition, School B has a higher prevalence of 'verbal games' 139.52 (SD = 28.63) compared to School A 43.12 (SD = 29.44), School C 1.17 (SD = 1.52), School D 3.05 (SD = 4.07), School E .08 (SD = .41). With the highest means for 'sedentary play' and 'conversation', children at School B may resort to 'verbal games' such as rhymes accompanied by arm actions, which do not require vigorous movement.

Table 9: Type of Activity (Vigorous play)

School	*Mean*	*SD*
A	40.67	49.51
B	14.56	2.89
C	.90	4.10
D	6.74	2.29
E	.21	.21

Class four children at School A are involved in 'vigorous play' with a mean of 40.67 (SD = 49.51), much more than School B 14.56 (SD = 2.89), School C .90 (SD = 4.10), School D 1.74 (SD = 2.29) and School E .21 (SD = .21).

Table 10: Type of Activity (Fantasy play)

School	*Mean*	*SD*
A	42.73	33.90
B	7.30	2.18
C	.93	.53
D	6.70	7.39
E	11.38	10.28

School A also scored higher in 'fantasy play' 42.73 (SD = 33.90) with School E second 11.38 (SD =10.28) compared to School B 7.30 (SD = 2.18), School C .93 (SD = .53), and School D 6.70 (SD = 7.39).

Table 11: Type of Activity (Chasing, catching and seeking)

School	*Mean*	*SD*
A	85.76	33.03
B	19.63	14.93
C	16.15	10.28
D	4.91	21.92
E	27.71	21.92

Furthermore, School A has more children 'chasing, catching and seeking' 85.76 (SD = 33.03) with School E 27.71 (SD = 21.92), more than School B 19.63 (SD = 14.93), School C 16.15 (SD = SD 10.28), and School D 4.91 (SD = 21.92).

Table 12: Type of Activity (Racing)

School	*Mean*	*SD*
A	19.39	16.99
B	7.04	7.29
C	6.90	4.32
D	.35	.87
E	.21	1.02

Moreover, School A has a higher mean for 'racing' 19.39 (SD = 16.99) compared to School B 7.04 (SD = 7.29), School C 6.90 (SD = 4.32), School D .35 (SD = .87) and School E .21 (SD = 1.02).

Table 13: Type of Activity (Jumping and skipping)

School	*Mean*	*SD*
A	12.06	12.02
B	1.11	3.29
C	10.39	6.16
D	.86	2.20
E	-	-

'Jumping and skipping' is far more present in School A 12.06 (SD = 12.02) and School C 10.39 (SD = 6.16) than School A 1.11 (SD = 3.29) and School D .86 (SD = 2.20). There is no jumping and skipping activities during recess at School E.

Table 14: Type of Activity (Ball games)

School	*Mean*	*SD*
A	.91	3.84
B	.07	.39
C	55.80	29.61
D	45.00	21.46
E	4.00	4.05

School C 55.80 (SD = 29.61) and School D 45.00 (SD = 21.46) have much higher means for 'ball games' than School A .91 (SD = 3.84), School B .07 (SD = .39) and School E 4.00 (SD = 4.05).

Table 15: Type of Activity (Nothing)

School	*Mean*	*SD*
A	25.03	25.65
B	83.85	27.57
C	115.05	19.15
D	25.86	7.52
E	2.71	3.56

Children in class four doing 'nothing' during recess are high in School C 115.05 (SD = 19.15) and School B 83.85 (SD = 27.57) than School A 25.03 (SD = 25.65), School D 25.86 (SD = 7.52) and School E 2.71 (SD = 3.56).

Table 16: Type of Activity (Games with material)

School	*Mean*	*SD*
A	24.24	20.86
B	71.81	29.40
C	22.98	9.74
D	41.49	19.65
E	67.00	33.73

'Games with material' occur more in School B 71.81 (SD = 29.40) and School E 67.00 (SD = 33.73) more than School C 22.98 (SD = 9.74), School A 24.24 (SD = 20.86), and School D 41.49 (SD = 19.65).

Table 17: Type of Activity (Other)

School	*Mean*	*SD*
A	28.97	19.25
B	3.33	2.09
C	6.02	3.62
D	71.84	16.75
E	5.00	4.08

Children involved in 'other' games is much higher in School D 71.84 (SD = 16.75) than School A 28.97 (SD = 19.25), School B 3.33 (SD = 2.09), School C 6.02 (SD = 3.62) and School E 5.00 (SD = 4.08).

Kruskal-Wallis Test

A test of normality of distribution was conducted for each variable, which showed significant skews. For example, the distribution for 'vigorous play' is positively skewed with a value of 3.531. In order to decide if the distribution varies significantly from normality, the skew value (3.531) is divided by the standard error of skew (0.187) to create a z-score of 18.88. According to Tabachnick and Fidell (1996), for samples less than 300, if the value exceeds an absolute value of 2.58, then the skew is significant. Thus, for 'vigorous play' the skew of 18.88 is significantly larger than 2.58, as a result it consists of a very significant level of skew. Therefore, a Kruskal-Wallis Test was conducted because it does not assume that the assumptions of normality have been met.

A Kruskal-Wallis Test was conducted with Type of Activities as the independent variable and Gender as the dependent variable. Males and females were found to significantly differ on three types of activities, vigorous play χ^2 (d.f. = 1) = 12.89, p< .0005, fantasy play χ^2 (d.f. = 1) = 14.09, p < .0005, and conversation χ^2 (d.f. = 1) = 7.71, p <.005. The 'vigorous play' for males, mean 19.71 (SD = 37.11), displayed a significantly higher mean score on females, mean 3.31 (SD = 8.65). The mean for 'Fantasy play' for males, 15.56 (SD = 19.79) is higher than females 10.98 (SD = 24.22). For 'conversation', the mean for females 92.42 (SD = 91.65) is higher than for males 58.23 (SD = 66.95). Thus, it can be said that during recess the significant difference between males and females is that males participate in 'vigorous' and 'fantasy' play more than females. On the other hand, females significantly participate more than males in 'conversation' during recess. The differences between boys and girls in the other nine types of activities were not significant.

Discussion

A significant finding from this study was that the main interaction seen across all schools during recess was that of being 'social' as opposed to being 'solitary' or simply 'parallel'. In terms of the three 'levels of social interaction', despite children in all schools demonstrating being very 'social', school B has the most pupils 'parallel' to each other during recess while School C has more 'solitary' ones. However, even if children are solitary or merely parallel at some stage of the recess, they often become social and involved later:

> I have noticed that a child could participate in two or more activities in this allocated 30 minutes per day and also those who were solitary most of the time had come out to participate in some activities with others (School D Observer).

Children were always interactive during recess and in a variety of activities. This study indicates that children always have a form of play to be involved in. Some of these play are active and while others are sedentary in nature. Recess is not an empty free time. As Geiger (1996) stresses recess is a space in which children express themselves and develop motor, cognitive, and social skills through play. There is always a hive of activity with children engaged in a myriad of play and

games. Kvalsund (2004) also finds that recesses are important arenas for social learning, in which through play and other interactions, children are engaged in informal learning. The types of activities children are involved in, however, did vary from school to school. This study also shows that what is prevalently played in each of the schools was different and affected by various factors.

Class four pupils of School A, for example, are more into vigorous play; fantasy play; chasing, catching and seeking; and jumping and skipping types of activities than the other four schools. Most schools in Fiji are managed by religious organizations and School A is a Hindu-ran school with a very mixed enrolment. School A Observer recalls during a break time that "we have short coconut trees beside the ground, when I turned my back, they broke off the leaves and they were using it as aeroplanes. The ground was all covered with coconut leaves" (School A Observer). This quote shows the amount of creativity children have. A coconut leaf can turn into a plane in fantasy play. This does not mean children of School A are only involved in vigorous play, fantasy play, and catching, chasing and seeking types of activities, but are also engaged in other types of play and games. The ones highlighted are the most prevalent types of activities in School A. As such, even if it rains and children are indoors, the levels of creativity among children is visible when carefully observed. In one of these rainy days at School A, a couple of the children were lying down and dozed to sleep. A group of students did a paper-folding activity and tallied their marks. A mark is gained when one's folded paper creates a noise. A Korean student taught another group how to fold paper birds and frogs. Then, there was another group of students making their own games using a dice, while a group of girls are putting on make-up with make-believe materials. These, among others, all occurred in a single rainy recess period. Recess periods are always full of activities exhibiting children's creativity, innovation, and learning expressed through play. School A Observer states that:

> You think the 30 minutes is short but there's lots happening. The amount of activities they can do in that time span is amazing. You observe them doing this, the next minute are doing something else. They are just moving all the time (School A Observer).

Children's recess play and games are avenues for learning. Teri (1996) stresses that dramatic play that provides opportunity to imitate or role play during recess, contribute to cognitive and social development. There is an element of reality when children imitate what they had seen before through make-believe or fantasy. Teri also emphasizes the importance of play to both social and cognitive development. Play helps children cope with frustration. Play has its origins in emotions. It is a fallacy to think that stress is mostly a factor in adult life. Children also go through a lot of stress. One of the ways children cope with stress is through play (Teri, 1996).

It is noteworthy in School A that the types of activities that are prevalent are active ones, such as vigorous play, fantasy play, chasing, catching and seeking, and jumping and skipping. These, importantly, provide an outlet for children's participation in moderate to vigorous physical activity. According to Axtman (2006) with the loss of physical education in many schools, recess provides a

venue for children to be physically active. In schools where there is a loss of both physical education and active recess, the holistic development of the child is undermined. Axtman emphasizes that such opportunities for play and active movements are as important to learning as the multiplication tables are to math. Recess thus promotes play and an avenue for children to be physically active. Play during recess can also meet children's need for belonging, power, freedom, fun, problem solving, conflict resolution skills, learning social rules such as turn taking, negotiating, and cooperating; and developing self-esteem and coping stress through play. In addition, it is vital to motor development, brain growth, providing stimulation of the senses of smell, touch, taste, and the body's sense of movement through space, aiding the development of children's perceptual abilities (Frost, 1998; Stork, 2005; Teri, 1996; Waite-Stupiansky & Findlay, 2001). Moreover, during play, children not only explore and reproduce cultural roles and expectations of gender, race, and class, but also test and resist these cultural conventions as they set up and breakdown boundaries in their play groups (Wohlwend, 2005). Therefore, play is a means of learning to live, not a mere passing of time (Stork, 2005).

Comparisons on the types of activity children are engaged in during recess shows that School B has the most children involved in conversation, sedentary play, and verbal games. These activities do not involve vigorous physical exertion. School rules that disallow more vigorous and active activities do help decide the activities of children during recess. Many of these rules have appeared because of issues to do with occupational health and safety, and duty of care that teachers have increasingly being expected to observe in Fiji. As a result, schools have varyingly allowed active play during recess. School B would be among schools in which active play are not encouraged during recess. School B is a Muslim school. Boys and girls always play separately in School B. This also stems from the difference in which Islamic physical activity cultures differ with Western and other physical activity cultures. There are three factors, particularly for females, in which the Islamic physical activity framework differs. They are gender segregation, a modest dress code, and controlled access to their physical activity space (Nakamura, 2002). It is therefore important that School B experiences recess, active play, and physical activity in a way that is meaningful to the culture of the school. Dagkas (2007) stresses that students bring to school very different backgrounds and experiences, attitudes, values and skills regarding play, games, sports and leisure. This requires teachers of Muslim students to be aware of the Islamic religious and cultural requirements such as dress code, gender segregation, religious festivals, exposure of the body and language.

When compared to the others, school C and D have more children involved in 'ball games', but children in school D have more children doing 'nothing' and 'other' games. School C is organized by parents while School D is a Catholic school. Ball games are popular in these two schools during recess because they are very strong sports schools who participate in a variety of sports in Suva competitions and leagues. School C is a dominant sporting primary school, for instance, dominating primary netball and hockey (Bola, 2009) and with a student who has retained the Fiji under 15 table tennis title for some years now including 2010 (Vuadreu, 2010). School C also performs consistently well in athletics, rugby, swimming, and other sport. This probably explains why School C has a

higher incidence of ball games during recess than the other ones. In School D, children play soccer, netball, touch rugby or Pani, during recess. Pani is a game in which a team attempts to stack tins up before being eliminated by your opponents who throw a ball at you. Schools C and D allow their children to use sports equipment during recess and break times. Children in school teams often use recess and break times to train as well.

Children of School E, a Fijian-ran school, did more 'games with materials' than other schools. Popular activities of children in School E are *jack stones* for girls and playing marbles for boys. School E Observer noted that children have their own terms for the rules, which can be different from other areas of Fiji. When she used to teach at Tavua, in the Western end of Fiji, the term children use there for the same activity were different to the ones used by children in Suva. Children in this school also participate in a variety of plays using their hands; one involves tapping on the floor, ball games, and games that use their shoes as well. School E Observer also noted that boys are often consistent with their play:

> The boys have been consistent with their play. If they are playing balls from the first minute, I have been observing them, they'll definitely be playing till the end. They have been consistent the whole time. They may change from one game to another, but a maximum of two changes (School E Observer).

Boys tend to be consistent in what they play in School E. In School A, however, the Observer reported how boys can move from activity to activity in the same recess. Most times, the boys and girls play separately. However, at times they get to play together. In School C, the Observer said that:

> I see these boys playing balls throughout, the girls play with the skipping rope. They sort of chant a song that goes with it and a few of the boys joined the girls. So most of the boys have left the ball and joining the chanting with the girls playing skipping (School C Observer).

Most children choose to play with those of their own gender grouping. However, Boyle, Marshall, and Robeson (2003) found also that there is evidence of border walks, that is, interactions where boys and girls play together during recess. This study also finds evidence of border walks across the genders, as stated in the quotation above.

Additionally, when gender is taken into account and compared, girls are involved in 'conversation' during recess, more than boys do. Boys, on the other hand, significantly engage in 'vigorous' and 'fantasy' play more than girls are. The finding that boys participate in more vigorous play than did girls is congruent with what Ridgers and Stratton (2005) found in their study in English primary schools. Ridgers and Stratton found that girls are engaged in more conversation and sedentary play such as drawing and reading. In this study, it found that the girls are significantly different from boys only in conversation but not sedentary play. Ridgers, Stratton, and Fairclough (2005) found boys, similar to this study, participating in vigorous play such as running, rolling or doing cartwheels. However, a difference is that boys in this study in Fiji are also engaged in fantasy

play such as cops and robbers, doing karate, or being like the ninjas, more than girls, while Ridgers, Stratton, and Fairclough found boys more into ball games. In fact, balls are not allowed during recess in a couple of the schools, thus boys may tend to find other forms of amusement other than doing ball games in the Fiji study. As has been alluded to earlier, the schools that are strong in ball sport and sports participation, however, allow their children to use balls and sport equipment during recess and also train during break times.

This finding also indicates that boys see recess as an opportunity to be involved in vigorous play and activity, while girls may see recess and break times as opportunities to socialize with friends. In the light of growing childhood obesity in Fiji schools, it is important that both genders are encouraged to be active during recess. For example, the obesity levels of children in Fiji has more than doubled from 4.5 per cent in 1993 to 13 per cent in 2004 (Senilagakali, 2006, p.3). Recess play may be the only time children would be physically active, if the school does not implement physical education and school sport. However, Boulton (2005) warns that violating gender-related norms during recess can lead to negative reactions from peers, especially for boys. The making of gender is a process in which parents, school, society, and the child all contribute towards. During recess, children also are active agents in making their social world and through social interaction they make sense of and deal with concerns related to gender (Boyle et al., 2003). Dahmes (1993) found that gender is certainly a factor influencing behavior during recess, as was age and race.

For the Observers, who are also the class teachers, there is new realization and perspective on their own school children. School E Observer realized that observing children during recess gives her a totally new perspective on her school children. During normal supervision, a lot of details go unnoticed. In a structured observation exercise, children's creativity and richness in originality becomes appreciated and notable. The observation exercise has allowed them to better understand their own pupils from a different perspective than they did before. School B Observer mentioned that:

> It has been a worthwhile experience that I have observed my pupils in the past few months. I have come to know my children very well and very close now …… now I understand why my children do these things, why they are involved in these kinds of activities (School B Observer).

School B Observer emphasized that it was an enriching experience to observe his own pupils. It is important in understanding why they participate in various activities. It helps the class teachers to appreciate the amount of thinking, creativity and learning that goes into children's play and games during recess. Santa (2007) explains that it should be noted that recess time is still classroom in the outdoors where children's innovations in creating games, stories and play thrive. Santa stresses preserving recess, whereas in countries such as the USA and Australia, many schools are reducing or eliminating recess time, and thus underestimating the value of recess and breaks. Break times for the schools sampled ranged from a total of 45 minutes to 85 minutes. Fiji's time for schools normally starts at 8 am and finishes at 3 pm. This adds to about 7 and 8 hours at school for children. Only 45 minutes of break time during the 8 hours is not

acceptable. Even adults, by labour regulations, should have enough break time during the working day. School children must be given enough times for breaks during the day. It can be child abuse if children are put in the classroom for long hours without sufficient breaks. Children's 'right to play' specified by the United Nations in 1989 must be defended in countries and communities (Zygmunt-Fillwalk & Billelo, 2005). Recess bells should not be silenced or reduced. It fulfills children's need for novelty and supports learning (Chaille, 2001).

Therefore, recess must not be seen as a non-achievement context, as it is a context for learning. Stork (2005) likened play and games during recess as nutrition. Just as nutrition is vital to children's development, so is recess play. Waite-Stupiansky and Findlay (2001) see recess as the fourth "R" because it helps in the learning of the other three. In addition, Axtman (2006) stresses the importance of recess play to learning, just as multiplication tables are to math. These analogies reiterate the importance of recess to the child's development.

Conclusion

This study found that in the five schools of class fours in Suva, Fiji children are unsurprisingly very social, rather than being solitary or parallel in their play. If children were solitary or simply being parallel to each other, they often become social and interacted with the others in some form of activity later. It is also noted that what is prevalent in all of the schools varies. The reasons for the variations are school rules, school culture, seasonal, and school focus on sport. For example, Schools C and D are strong sports schools and participate in a variety of school sports leagues and competitions, influencing the prevalence of ball games during recess. School A children participate in conversation, sedentary play and verbal play, more than other schools due to school rules' control over active movement during recess. Furthermore, in School E the high incidence of 'games with material' such as *Jack Stones* and playing marbles are merely seasonal. After some time, these games change as other types of play dominates break times, when the current ones go out of fashion. One thing, however, is certain. Children are extremely creative during recess. With an observant eye, like research assistants did in this study, children's creativity in recess play and games become evident. When the genders are compared, boys are significantly into 'vigorous play' and 'fantasy play' more than girls are, whereas girls are significantly into 'conversation' than boys are. The other variables were not significant. This indicates that boys are more into vigorous types of activities than girls. This also shows that girls may see recess as an opportunity to socialize with their friends, and boys as a time to be involved in active play.

The informal social experiences of pupils during school recess and break times should not be neglected. Recess is an important time for children to play, meet friends, develop social skills and be free from adult-controlled activities. Starting from the home to the school and back home again, children are being controlled by adults, but recess provides a time for them to negotiate their own activities in their own terms. They eventually develop a distinctive and vibrant culture, separate from the classroom and home life. Recess goes beyond simply being a period to satisfy basic needs of eating, having a drink, and visiting the toilet. It has benefits to children's development. Playtime is important and must

be preserved. In fact, in my language, one of Solomon Islands' eighty-five languages, recess is *'Jolo Sala'* which means *'going out to play',* so let us open the doors and allow children to play safely during recess. With it comes the laughter, the joy of discovery, fun, and learning to live. Recess is not just a time that children 'hang out' but provides a venue for children to socialize, be active, interact, and a space to develop motor and social skills. As the old adage goes 'All work and no play makes Jack a dull boy', recess is music to children's ears, released from the confines of the classroom and the inherent control it represented, and to be free to run, to plan, to think, and dream. Thus, it is recommended that the Fiji Ministry of Education and schools should be encouraged to create a policy that recognizes that recess is an achievement setting and allow children to participate in safe recess play and games. Furthermore, recess play and games can provide children with the opportunity to be physically active, which means that schools can provide an enabling environment that allows children to be active with particular encouragement for girls.

Reference

Axtman, K. (2006). Recess backlash: Parents say it pays to play. *Our Schools, Our Selves, 15*(2), 149-152.

Barbour, R. (2007). Doing focus groups. Thousand Oaks, California: SAGE.

Beresin, A. R. (2002). Children's expressive culture in light of September 11, 2001. *Anthropology & Education Quarterly, 33*(3), 331 – 337.

Blatchford, P.; Baines, E. & Pellegrini, A. (2003). The social context of school playground games: Sex and ethnic differences, and changes over time after entry to junior school. *British Journal of Developmental Psychology, 21*, 481-505.

Beth, D. & Patrick, M. (1996). Recess Reports: Self-Identification of students with friendship difficulties. *Paper presented at the Annual Meeting of the American Psychological Association,* August 9-13, Toronto, Canada.

Blackwell, J. (2004). Recess: Forgotten, neglected, crossed off, or hidden. *Childhood Education,* 80(5), 268-267.

Blatchford, P.; Baines, E. & Pellegrini, A. (2003). The social context of school playground games: Sex and ethnic differences, and changes over time after entry to junior school. *British Journal of Developmental Psychology, 21*, 481-505.

Bola, V. (2010, June 28). Veiuto netters dominate in Suva. *Fiji Sun,* p. 25.

Boulton, M. J. (2005). Predicting changes in children's self-perceptions from playground social activities and interactions. *British Journal of Developmental Psychology, 23,* 209 – 226.

Boyle, D. E.; Marshall, N. L. & Robeson, W. W. (2003). Gender play. *The American Behavioral Scientist, 46*(10), 1326 – 1345.

Butcher, D. A. (1999). Enhancing social skills through school social work interventions during recess: Gender differences. *Social work in Education, 21*(4), 249 – 262.

Chaille, C. (2001). The silencing of recess bells. *Childhood Education,* 77(5), 319-320.

Dagkas, S. (2007). Exploring teaching practices in physical education with culturally diverse classes: a cross-cultural study. *European Journal of Teacher Education, 30*(4), 431-443.

Dahmes, V. M. (1993). A descriptive study of multicultural elementary student playground behaviours and their relationship to gender, age, race, and socioeconomic status. *Paper presented at the Annual Meeting of the Mid-South Educational Research Association*, November 10-12, New Orleans, USA.

Doll, B. & Murphy, P. (1996). Recess reports: Self-Identification of students with friendship difficulties. Paper presented at the *Annual Meeting of the American Psychological Associations,* August 9-13, Toronto, Canada.

Epstein, D. (1999). Where the kids are: Power relations in classrooms and playgrounds. *British Educational Research Journal, 25*(3), 401-404.

Ernst, M. P. (2003). Appropriate practices for elementary school physical education. *Teaching Elementary Physical Education, 4*(1), 35.

Evans, J. (2003). Changes to (primary) school recess and their effect on children's physical activity: An Australian perspective. *Journal of Physical Education New Zealand,* 36(1), 53-62.

Evans, J. & Pellegrini, A. (1997). Surplus energy theory: An enduring but inadequate justification for school break-time. *Educational Review,* 49(3), 229 – 236.

Frost, J. L. (1998). *Neuroscience, play, and child development*. Paper presented at the IPA/USA Triennial National Conference, June 18 – 21, Colorado, USA.

Geiger, B. (1996). *A time to learn, a time to play: Premack's principle applied in the classroom*. Paper presented at the Annual Meeting of the Northeastern Educational Research *Association,* October 2-5, , Ohio, USA.

Jones, R. B. (2005). A cognitive approach to elementary school recess. *Teaching Elementary Physical Education,*16(2), 33-34.

Leff, S. S. & Lakin, R. (2005). Playground-Based observation systems: A review and implications for practitioners and researchers. *School Psychology Review,34*(4), 475 – 489.

Mota, J.; Silva, P.; Santos, M. P.; Ribeiro, J. C.; Oliveira, J. & Duarte, J. A. (2005). Physical activity and school recess time: Differences between the sexes and the relationship between children's playground physical activity and habitual physical activity. *Journal of Sports Sciences,* 23(3), 269-275.

Nakamura, Y. (2002). Beyond the Hijab: Female Muslims and physical activity. *Women in Sport and Physical Activity Journal. 11*(2), 21-34.

O'Brien, L. M. (2003). The rewards and restrictions of recess: Reflections on being a playground volunteer. *Paper presented at the Annual Meeting of the American Educational Research Association,* April 21-25, Chicago, USA.

Okely, T.; Patterson, J. & Booth, M. (1998). Promoting physical activity – Rationale and guidelines for promoting physical activity in schools. *Journal of Physical Education New Zealand, 31*(3), 3-5.

Parker, D. B. (2004). Time for a play day. *Parks & Recreation, 39*(12), 60 – 68.

Pellegrini, A. D. & Bohn, C. M. (2005). The role of recess in children's cognitive performance and school adjustment. *Educational Researcher,34*(1), 13-19.

Pellegrini, A. D.; Kato, K.; Blatchford, P. & Baines, E. (2002). A short-term longitudinal study of children's playground games across the first year of school: Implications for social competence and adjustment to school. *American Educational Research Journal,* 39(4), 991 – 1015.

Peterson, J. A. (2002). Eliminate playgrounds? You must be nuts! *Parks and Recreation,* 37(5), 92 – 95.

Ridgers, N. D.; Stratton, G. and Fairclough, S. J. (2005). Assessing physical activity during recess using accelerometry. *Preventive Medicine,* 41(1), 102-107.

Ridgers, N. D. & Stratton, G. (2005). Physical activity during school recess: The Liverpool sporting playgrounds project. *Pediatric Exercise Science, 17*, 281-290.

Roth, J. L.; Brooks-Gunn, J.; Linver, M. R. (2003). What happens during the school day? Time diaries from a national sample of elementary school teachers. *Teachers College Record,* 105(3), 317-343.

Sanders, S. (2000). Free day Friday! *Teaching Elementary Physical Education,* 11(5), 3 – 5.

Santa, A. (2007). The playground as classroom. *Educational Leadership. 64*(8), 78-79.

Senilagakali, J. (2006, February 9). Junk food laws could battle obesity. *Fiji Times,* p.3

Sherman, N. W. (1999). Are elementary school girls getting enough physical activity during the school day? *Journal of Physical Education, recreation and dance,*70(8), 13.

Stork, S. (2005). International play association, USA. *Teaching Elementary Physical Education,16*(2), 35.

Stratton, G. & Leonard, J. (2002). The effects of playground markings on the energy expenditure of 5-7 year-old school children. *Pediatric Exercise Science,14*, 170-180.

Tashakkori, A. & Teddlie, C. (1998). Mixed methodology: combining qualitative and quantitative approaches. Thousand Oaks, California: Sage.

Teri, P. (1996). *Play: An important component of preventative behaviour management*. Paper presented at the Annual Conference of Southern Early Childhood Association, March 11-16, Little Rock, Arizona, USA.

Twarek, L. S. & George, H. S. (1994). Gender differences during recess in elementary schools. *Report,* Perkins Public Schools.

Vuadreu, L. (2010, August 28). Upsets on the table. *Fiji Sun,* p.100

Waite-Stupiansky, S. & Findlay, M. (2001). The fourth R: Recess and its link to learning. *The Educational Forum,* 66(1), 16-25.

Watkinson, E. J.; Dwyer, S. A. & Nielson, A. B. (2005). Children theorize about reasons for recess engagement: Does expectancy-value theory apply? *Adapted Physical Activity Quarterly, 22*, 179-197.

Wohlwend,K. E. (2005). Chasing friendship: Acceptance, rejection, and recess play. *Childhood Education, 81*(2), 77-82.

Zygmunt-Fillwalk, E. & Bilello, T. E. (2005). Parents' victory in reclaiming recess for their children. *Childhood Education,* 82(1), 19-23.

Chapter 7: Out-of-school Activities of Three Fiji Primary Schools

Jeremy Dorovolomo

> "We need many more attempts to understand what children themselves wish to do out-of-school hours, as an essential component of planning to provide as well as possible for the varying interest groups concerned" (Mayall & Hood, 2000, p. 80)

Introduction

This investigation was conducted in relation to the out-of-school activities of 63 class four children in three Fiji primary schools. Out of this group, 33 (52.4%) were male and 30 (47.6%) female. The average age was nine years at the time of the data collection. In addition, 29 (46%) were from rural schools while 34 (54%) were from an urban school. Using a Recall method, children were asked to recover activities that they did after school on the previous day. This was facilitated by their class teachers. Data was analyzed utilizing the Analysis of Variance (ANOVA). The findings found that when compared with other activities, television viewing has the highest participation after school. It is considered that this would contribute to the diminishing opportunities where children can be physically active. In particular, rural children are 'playing outside' their homes more than urban children and, in addition, girls significantly participate in more 'household chores' than boys. This indicates the need to construct interventions to reduce the television viewing habits of particularly urban children. For example, cities and towns could promote physical activity by providing sufficient play space within suburbs where family recreation could be facilitated. The promotion of activity within households could include various chores for both daughters and sons that may also require them to expend energy, such as gardening and cleaning up in the outdoors.

Literature Review

The hours between 2 and 6 p.m., when students are out of school, has always been a concern in terms of what they are doing in comparison to what they should be doing (Belloti, 2005). Interest in this area was more fervent in the early 1900s when educators became interested in the overall development of the child, not just when they are at school (Schreiber, 2002). These 'empty' afternoons have been considered as potentially 'dangerous times' when some students are known to commit crimes, get involved in drugs and other anti-social activities. This is supported by research citing between 3 and 4 p.m. as the period of the day when crimes peak for juveniles. Thus, the focus on after-school programs was the prevention and deterrence of students from such crimes by keeping them occupied (Belloti, 2005; Vinluan, 2005; Williamson & Georgiadis, 1992). There has been, however, a considerable shift in focus from simply problem prevention and deterrence in after-school programs to youth preparation and development. Students in after-school programs should be seen as resources to be nourished, rather than problems to be managed. After-school programs do not solely focus on filling idle time and keeping youth off the street, but provide enriching experiences, help students take charge of their lives, improve their socialization, increase school achievement, and also enhance their skills (Stiehl & Galvan, 2005; Witt, 2001).

In terms of time for physical activity, television has disturbingly been found to take up a very large share of children's out-of-school time (Evans, 2003; Wells & Blendiger, 1997). It is considered that children left unattended after school may not receive sufficient levels of physical activity (Zhang & Byrd, 2005). In a study by Dale, Corbin, and Dale (2000), they reported the lack of physical activity by most students after school. This is exacerbated further if these students had not been given opportunities for physical activity during the school day. Vinluan (2005) stresses that children who attend after-school programs tend to be those who are already most likely to participate. For example, girls, despite the growth in sport and physical activity opportunities are less likely to be involved than boys (Watson, Poczwardowski, & Eisnman, 2000). Children of lower socio-economic status are less likely to attend after school programs than higher-income ones (Heyman, 2000; Simpkins, Ripke, Huston, & Eccles, 2005). Age wise, younger children generally are more likely to attend formal after-school programs than older children (Pedersen, 2005; Riggs & Greenberg, 2004).

This makes it paramount that after-school programs provide suitable environments for students. Children's fitness and physical activity levels can only improve if it is appealing for the target audience (Colchico, Zybert, & Basch, 2000). For the environment to be appealing to the target audience, the after-school program must be grounded in listening to what the audience says. For instance, if an intervention is planned to increase the physical activity levels of girls (the "customers"), organizers must listen to what they say about specific physical activities (the "product"). Moreover, if the program is to accommodate adolescent girls, a non-competitive environment should be provided at the outset (Watson et al., 2000). A very important factor especially among adolescents is the issue of belonging (Stiehl & Galvan, 2005). Will others accept my size, gender, disability, ethnicity, attire, or age? There would be an array of issues these youngsters will ponder as they attempt to fit into the diverse and sometimes

conflicting cultural messages and identities. Thus, providing an environment of belonging is salient. When students are free from negative pressure and have a sense of belonging, they become more open to making decisions, taking risks, and accepting challenges.

There is no single formula for a quality after-school program, but a design based on physical activities alone is seen as narrow (Zhang & Byrd, 2005). There should be a broader combination of academic, recreational, physical, community work and artistic elements (Stiehl & Galvan, 2005; Zhang & Byrd, 2005). In Denmark and other European countries, for instance, after-school professionals are feeling pressure to scale back playtime and insert more homework and other academic activities (Manzo, 2006). The physical activity element, however, should not focus on fitness objectives but on developmentally appropriate participation, enjoyment and fun; to better promote lifelong physical activity participation (Watson et al., 2000). These physical activities should not only be developmentally appropriate but culturally appropriate, novel, creative, demanding and achievable (Stiehl & Galvan, 2005; Vinluan, 2005; Witt, 2001).

These out-of-school programs cannot produce positive outcomes without a critical element in program quality, a committed and competent workforce. Children are best served if program staff are well trained, well compensated, and likely to remain in their jobs (Witt, 2001). Often, staff compensation is low and there are regular staff changes. Consequently, Witt stresses that one of the challenges is recruiting and retaining quality staff. In order to have program impact and usefulness, it has to be both in-depth and long-term. It can only be long-term and sustained if sufficient and sustained funding occurs. Even with sufficient funding, which is rarely present, there is no one organization that can provide all the expertise and services that youth need. There is a need for after-school services to work together with other organizations and institutions, for example, sports clubs, schools, youth centres, clinics, universities, city councils and other community-based organizations. It is these collaborations, that if nurtured properly, will enable the sustainability of after-school programs (Haigh, 2005; Noam, Miller, & Barry, 2002).

City mayors and council members play a critical role in facilitating the provision of after-school opportunities. These out-of-school opportunities should also be accessible to all children and youth (Shah & Karpman, 2006). Cities need to be planned with play spaces for children in mind (Teri, 1996). National governments also have important roles in providing after-school programs. The United States, for the 2005-2006 academic year, appropriated more than USD$1 billion to maintain or establish after-school programs. It is estimated that approximately 25 to 30 per cent of youths in America spend three to five afternoons in organized after-school programs (Zhang & Byrd, 2005) however, at least 7 million “latchkey children” in the United States still return to empty homes after school (Vinluan, 2005). Parents and adults have the responsibility then to ensure that opportunities for physical movement are abundant outside of school. Stringent effort has to be made to provide children with plenty of chances to be active over the duration of the entire day (Dale et al., 2000). However, for ongoing participation in structured activities, families do not have a direct effect but peers do. One’s peers strongly influence one’s participation in and enjoyment of out-of-school physical activity. This is not saying that the family is not

important, but the family may be more of a 'safety net' than having direct influence on ongoing participation in after-school activities (Morrisey & Werner-Wilson, 2005; Watson et al., 2000).

But youths do not grow up in programs, but in families, schools, and neighborhoods (Stiehl & Galvan, 2005). Many children are overscheduled, pushed to many activities at an increasingly younger age and expected to compete and achieve. Children need time to unwind after school, to use their imagination and invent their own games. Not having that time can cause stress, and that kind of stress should not be a part of childhood and youth (McCarthy, 2005). In Norway and Finland, children's use of time and place are differently regarded. In these countries, self-determination out-of-school hours are highly valued. The issue is control of learning, whether students should be adult controlled the rest of the day or given environment to participate in physical activities determined and organized by themselves at their own time (Mayall & Hood, 2001). Globally, children return home to an empty home. Their parents are still at work or elsewhere when the child gets home. These 'latchkey' children usually spend one or more hours at home alone. Through this experience various children may develop independence at an early age (Vannoy, 1988). On the other hand, it can lead children to negative habits of juvenile delinquency, drug and alcohol abuse. These hours are critical and whether out-of-school time should be adult imposed or invented by children in a safe environment, parents need to recognize the importance of the after school hours (Vannoy, 1988).

In Fiji, there are concerns about students committing violent robberies and theft. A student, for example, was jailed for nine months for theft by the Suva magistrate in 2006 (Delaivoni, 2006; Vunileba, 2006). There are concerns about sex crimes (Biumaiono, 2006); and that forty per cent of students had consumed alcohol (Lalakato, 2006). Moreover, schools in certain locations of Fiji are reported to have higher use of drugs and inhalants even at primary schools (Ralogaivau, 2008). Consequently, a student of Suva was taken to the hospital after sniffing glue and was found lying unconscious on the road (Sam, 2008), while five students from a prominent school in Fiji were expelled for drinking home-brewed alcohol (Wilson, 2008). Two rival high schools in Suva were involved in scuffles in the city ending at the bus stands. The Police monitored their after-school movements to avoid a major confrontation. Rivalry and fights between these two schools had occurred sporadically in the last thirty years (Bola, 2006). In Lautoka City, the police have warned students to refrain from fighting in public. The police made this remark after students from four different Lautoka schools had a fist fight at the bus station after school (Sam, 2008). There are a host of other situations children can find themselves in after school. For example, a boy drowned in the Wailoa River in Naitasiri, while swimming with other children. Furthermore, a boy was hit by a car in Nabua, Suva City, and was hospitalised (Chand, 2010a). There is also concern that students are lingering around Suva City after-school up to 6 p.m. without being engaged positively (Ward, 2006).

There was the tragic death of an eight-year-old boy who attempted to gain entry through their family home window and as he was half way through, one of the glass windows broke and pierced him in the stomach. He died from excessive bleeding. The boy attempted going through the window when he returned home

from school and parents were not at home and the door was locked. This happened in Tavua, in the West of Fiji (Volau, 2010). A psychologist raised serious concerns about children as young as 7 to 14 years of age who stay overnight in internet cafes in Suva City (Raicola, 2010). The popular time is after school on Friday to Saturday mornings. This psychologist stresses that parents and the community need to be more thoughtful about where their children are, as these children who stay overnight at internet cafés are mostly from functional homes. Parents should realize that children staying overnight in e-cafes has no benefit. Early association with unsavoury peers, watching porn, and playing games the whole night are obviously not considered developmentally appropriate for children (Raicola, 2010). In addition, there are also children in Fiji who are spending time after school in the sex trade to buy themselves materials for school and other needs. This prompted the Fiji Head Teachers Association to advise parents and guardians to be vigilant about the possibility of this (Wise, 2008). According to an International Labor Organization report, about 109 children are involved in prostitution in Fiji. Children who live with extended families, suffer parental neglect, live in violent homes, and are victims of physical and sexual abuse, are more vulnerable to such exploitation (Elbourne, 2010).

It is not only what children are engaged in out of school but also the danger they are exposed to through the unhealthy behavior of others. Children are often reported being raped. A 14-year-old girl, for instance, is pregnant after being repeatedly raped by a close relative. Perpetrators are often people a child knows (Bautolu, 2008). A 12-year-old girl was gang raped by seven men in Dreketi, Vanua Levu (Ralogaivau, 2009). A man was sentenced to fifteen years of imprisonment for brutally raping an eight-year-old girl in Suva (Chand, 2010b). Disturbingly, students are also implicated in cases of rape. A 13-year-old boy was questioned by police for allegedly raping his three-year-old neighbor (Marau, 2008) and two young children were also raped by teenagers (Singh, 2011). Many children are also not safe at home. A ten-year-old boy fought for his life at the Lautoka Hospital after being kicked and beaten by his father. The Fiji Social Welfare Department is extremely concerned and states that the Department's statutory responsibility is to ensure that no child under the age of 17 years is exposed to any form of physical or moral danger. The Police and Social Welfare Department are treating the case seriously (Marau, 2010). Cases of child abuse reported to the Fiji Social Welfare Office have increased by 15 per cent (Niumataiwalu, 2009). Between 1995 and 2009, a total of 1008 cases of child neglect were reported to Fiji Social Welfare Department. Out of this, 666 were reports of sexual abuse, 610 of physical abuse, 430 beyond control cases, 314 abandoned and lost cases, and 250 of emotional abuse (Rina, 2010). Clearly, what children do out of school and what is done to them is important. What happens to children out school should be a concern for educators, as is also the concern for others such as parents, the police, or welfare departments. The array of situations children find themselves involved in out of school is justification for an investigation into what they actually do after school.

The following research questions are therefore considered:

- What activities do Fiji primary school children engage in out-of-school?

- Are there gender differences in what activities school children engage in after-school?
- Are there differences in after-school activities between rural and urban primary schools?

Method

Three schools were involved in the study with sample being the class four pupils from each of these schools. An information sheet, explaining the research, was included with the consent forms. Signed consent was taken from the parents of all participating students. The class teacher also explained to pupils about the research and that it will not necessarily disturb their out-of-school activities. This research project uses an adaptation of the out-of-school recall instrument by Wells and Blendiger (1997). This instrument was set up to consider the out-of-school behavior of children and to gather information about how children spent their time outside of school from Monday through to Sunday over a two week period. The instrument listed ten mutually exclusive activities and an 'other' to allow children to write further activities that did not fall within those listed. The activities were playing outside, playing sport, playing inside, television watching, reading, playing video games, home chores, homework, shopping, and others. Weekdays and weekends were differentiated with the weekend data collection having longer time frames. Each child completed the data once a day and it was administered to them daily for two weeks. The data collection was completed in the school environment and administered by the class teacher. The first task in the morning was that the class teacher gave the children time to recall and put down what they had done after school on the day before. For consideration is that children may do more than one activity in an hour. The children could indicate this by putting a tick against multiple activities. On the other hand, they may be involved in a single activity for more than an hour. Pupils were able to ask questions if they were not clear about what was being requested of them.

The instrument (Wells & Blendiger, 1997) utilizes a Recall method of gaining information. Participants were asked to recall their activities about the previous day, preferably early in the morning of the following day. This was so as to avoid confusion with the current day's activities (Belton & Donncha, 2010). There are Recall methods such as the 3 Day Physical Activity Recall (3dPAR), in which activities are recalled over three days, administered on a Wednesday (Stanley, Boshoff, & Dollman, 2007). This study however utilized the 24-Hour Recall (Calabro, Welk, Carriquiry, Nusser, Beyler, & Mathews, 2009), which applies to the collection of information and behavior from only the previous day. This is chosen because recapturing activities done by class fours over three days would be a highly complex cognitive task for them to perform. Recovery of information just in the previous day from 3 p.m. to bed was the preferred procedure. The collection proceeded over the two weeks. The fact that the data was collected in a classroom situation, where the children congregated each day, than a scattered population, enhanced the efficiency of the data collection.

Results

In the study, there were 63 pupils who completed the data collection, of which 33 (52.4 %) were male and 30 (47.6%) female. School X's class four had 34 (54%) pupils, School Y 14 (22.2%) pupils and School Z 15 (23.8%) pupils. Most children 44 (69.8%) were nine years of age, 14 (22.2%) were 10 years old, 2 (3.2%) were 8 years of age, 2 (3.2%) were 11 years old, while only 1 (1.6%) child was 12 years of age. Of the sample, 33 (52.4%) are Fiji Indians while 30 (47.6%) are Fijians. There are no children from minority groups in these classes. The Fiji Indian students are Hindus while the Fijians are Christians. 34 (54%) were from an urban school. School X is the urban school in the Nasinu municipality, in the outskirts of Suva City. 29 (46%) of the pupils are from a rural environment in Tailevu, a province of Fiji. School Y and Z were from this rural context. There were two schools chosen, compared to one urban school, because the enrolments are low in these rural areas. This would allow pupil numbers to be more comparable for rural and urban settings.

A one-way analysis of variance (ANOVA) was conducted with Location (rural vs urban) as the independent variable and Playing Outside as the dependent variable. A significant effect was found for Location, $F(1, 61) = 7.405$, $p < .0005$. It is found that pupils located in the urban school, $M = 10.50$, $SD = 5.57$, display significantly lower mean ratings of Playing Outside, out of school, than rural pupils, $M = 15.97$, $SD = 10.05$. A significant effect was also found for Location against Playing Inside, $F(1, 61) = 17.38$, $p < .0005$. It is found that rural pupils, $M = 5.03$, $SD = 3.99$, display significantly lower mean ratings of Playing Inside, after school, than urban children, $M = 11.44$, $SD = 7.41$. ANOVA on other variables were not significant against Location. However, results for Location against Watching Television showed the highest means, rural $M = 18.33$, $SD = 3.99$, and urban school $M = 21.41$, $SD = 13.78$, indicating high television watching in both locations. This is in contrast to Playing Sport, rural $M = 3.21$, $SD = .45$, urban $M = 6.44$, $SD = 6.85$; Playing Video Games rural $M = 3.90$, $SD = 4.05$, urban $M = 7.06$, $SD = 5.99$; or Homework rural $M = 11.21$, $SD = 3.37$; urban $M = 5.59$, $SD = 5.38$. In terms of gender, all other variables were not significant except for Home Chores. A significant effect was found for Gender, $F(1, 61), = 5.83$, $p < .0005$. It is found that males significantly have a lower mean rating for Home Chores $M = 6.67$, $SD = 5.85$, than females $M = 11.30$, $SD = 9.17$.

Discussion

The study aimed to investigate activities children do after school. One of the significant findings of this study was that rural children engaged in 'playing outside' more than their urban counterparts. Potvin, Gauvin, and Nguyen (1997), found a similar situation in a study of 4, 768 grade 4 to 6 children of Quebec, Canada, that rural children have the highest rates of readiness for physical activity in comparison to those in suburban and inner city communities. They also noted the relationship between the structural or environmental aspects of communities in which children live that helps to decide the frequency of participation in physical activity. Loucaides, Chedzoy, and Bennett (2004), after studying 256 Greek-Cypriot school children, explain that the environmental aspect that

influences physical activity levels for children of rural schools is that they had more space in the garden and neighborhoods. This is in contrast with urban children who have less space in their own outside environment and were more likely to be transported to where they would be physically active. In rural School Y, for example, children engage in a lot of swimming in their village river after school. The open and wider village environment allows these rural children to be more active and play outside after school than urban children. Using the swimming example, in an urban environment, children would need to pay to use the City Council's pool, which may be a barrier for many children. Therefore, structural and environmental issues help provide explanation to the rural-urban difference in 'playing outside'.

Contrary to findings of rural students being more active than urban children, Plotnikoff, Bercovitz, and Loucaides (2004), in a study of 2, 697 students of parts Canada, found that the prevalence of being overweight and inactivity are higher among rural than urban children. They explained that recreational facilities might be limited in rural communities and may be one of the causes of such outcome. However, rural environments would be different from context to context. The rural context from Canada would obviously be different from the rural context in Fiji or other countries. In the study of 5, 535 English school children Francis (1999) found that rural children have a higher leisure satisfaction level than urban children. Louie and Chan (2003) investigated physical activity trends among young children in Hong Kong schools using pedometry and found that children in the rural district were more active than their counterparts in urban schools. Louie and Chan also identified that time spent outdoors was a prime factor affecting children's physical activity levels. Moreover, Van den Bergh (1997) investigated the nature and quality of living conditions and competence of 1,798 6 to 12 year old primary pupils. Comparison was made regarding the experiences of children attending school in a village with those of children attending school in a city in Belgium. It was found that children in villages play outside and visit their friends to play more than city children do. Therefore, the finding in Fiji of children playing outside more than city children do is congruent with various studies conducted elsewhere.

Another finding of this study is that of children in the urban school 'play inside' their homes, such as drawing or play with toys, more than rural children do. This certainly has a relationship with the previous finding of rural children 'playing outside' more than their urban counterparts. If rural children spend more time playing outside than urban ones, they would overtly spend less time playing inside their homes, vice versa. However, the finding that was consistent in both rural and urban schools, in all three schools involved in the study, in boys and girls, in both Fijians and Fiji Indians, and receives the highest scoring, is watching television. Watching television is increasingly taking up children's time outside of school. McHale, Crouter, and Tucker (2001) found in the United States, studying 198 pupils, that television viewing was children's most common free-time activity. Wells and Blendinger (1997) also studied 75 United States fifth graders in a semi-rural school and reported that watching television is the most prevalent activity. They added that children are watching television too much and reading too little. This can also be said in this Fiji study, as reading and particularly doing homework received much lower ratings than watching

television. This according to Wells and Blendinger (1997) interferes with family interaction. As a result, children are spending lesser and lesser time in meaningful interaction with significant adults and peers and more engaged with screens.

In a comparative study between 8, 912 U.S students and 5, 309 Korean middle school students, Won and Han (2010) found that in both countries, watching television and playing with friends were the most common activities. However, Korean students spend more than 30 per cent of their out-of-school time using the internet and playing computer games on their personal computers, while American students spend 27 per cent of their time out-of-school hours playing sport, work at home or into a paid job. U.S students spend time doubling that of Korean counterparts playing sport out of school. Korean students may lack youth sport programs, leisure activities or have tight schedules for study. In this Fiji study, playing sport outside of school rates very low, in both rural and urban children. The reasons could also be a lack of children's sports programs out of school, a lack of leisure facilities, and/or parents' attitude towards sports. The urban school of the Fiji study are mostly Fiji Indians, whose participation in sports, especially females is very low. Fiji Indian males participate mostly in soccer while Fiji Indian females are barely represented in community and representative sports. In the nationwide Fiji school athletics competition in 2010, for example, of the 128 gold medals presented, 97 per cent of it were received by Fijians while 3 per cent were awarded to Fiji Indians, all of whom were boys (Khan, 2010). Khan suggests that parents may need to change their mindset towards an appreciation of the importance of sports to children's development. The low participation rate in sport after school among children in this study may reflect a low participation rate for many children generally in Fiji. It also indicates the salience of providing structures within the community in order to promote developmentally appropriate and inclusive sports programs so that children have an array of options to be physically active.

Patriarca, Giuseppe, Albano, Marinelli, and Angelillo (2009), in their study of 11 to 16 year olds in a region of Italy suggested that immediate and comprehensive actions needed to be taken in order to reduce the time that children's time were spending on watching television. Chen, Liou, and Wu (2008), who studied 660 Taiwanese adolescents, found that excessive television viewing is negatively associated with adopting health-promoting behaviors such as health responsibility and exercise behavior. They emphasized that parents need to be educated on how to become a healthy electronic media user. Healthy electronic use for both parents and children is imperative, as Jago, Fox, Page, Brockman, and Thompson (2010) found that high television viewing by parents is associated with high television viewing among children. This was in an investigation of year six children and their parents from 40 primary schools in the United Kingdom. Jago and colleagues suggest that changing the television environment at home may be important in reducing television viewing among children. A simple but practical suggestion made by Sonneville and Gortmaker (2008) is to avoid having meals such as the dinner in front of the television, but rather have it properly on a dinner table away from the television. Sonneville and Gortmaker suggested this because television watching is related to an increase in students' body mass index (BMI). Their investigation of 538 students of Boston, United States, revealed a daily energy surplus associated with watching

television. Other activities such as reading and doing homework were neutral in their relationship with energy surplus, except for television watching.

Increased food intake during television viewing, especially of unhealthy snacks, result in incremental increases in BMI that contributes to eventual obesity. Parson, Manor, and Power (2008) conducted a longitudinal study of 11, 301, 16-year-old English, Scottish and Wales youths. BMI was measured following 45 years. They found that frequent television viewing during adolescence was associated with greater BMI accumulation and obesity during adulthood. Earlier television habits were likely to result in unhealthy weight gains through to adulthood. A study of similar design by Hancox and Poulton (2006) of 1, 037 children aged 3 and then later at age 15 in Dunedin, New Zealand, also uncovered television viewing as a significant predictor of increased BMI and of being overweight in childhood. Thus, the highest occurrence of pupil activities after school in the three Fiji schools being studied is watching television, poses a cause for concern. The obesity levels of Fiji children between 1993 to 2004 have more than doubled (Senilagakali, 2006). A contributing factor could be increasing time spent on watching television, which is a sedentary activity in itself. Not only is it a sedentary behavior but, as has been mentioned previously, it is also a behavior associated with intake of energy surplus and increased BMI. Therefore, television viewing among children should be a valuable target for strategies to reduce obesity levels. Studies of what children do after school is important as knowledge of how students spend their hours out of school can assist educators and policymakers to intervene appropriately. Children's television environment at home is a useful venue for intervention.

A dimension of television watching that is also associated with increased BMI and obesity is food advertising targeted at children and youth. As Zimmerman and Bell (2010) explain that there are three main avenues in which television encourages obesity. Children are exposed to food advertising of goods that are low or without nutritional value, it displaces time that could have been used for physical activity and active play, and that television promotes eating while viewing. In terms of food advertising, there needs to be relevant policies established to limit advertising obesogenic foodstuff that is targeted at children. Relevant policies are important because Kelly, Halford, Boyland, and Chapman (2010) compared television advertising patterns in 13 countries over 5 continents and found that the marketing of unhealthy products was consistent throughout these nations and continents. Children are exposed to high volumes of food advertising on television. These advertisements influence children's food preferences, purchase requests, and consumption. Advertising of unhealthy foodstuff to children allows an obesity-promoting environment. Therefore, it is important that policies are formulated and implemented vigorously against obesogenic food advertising on television. In order for changes to occur, Fiji and Pacific countries must formulate comprehensive interventions, as such programs can increasingly be limited by forces of globalization. This is so because transnational corporations, which have developed brand names and know their marketing strategies, have adapted these to local tastes. These corporations employ aggressive marketing strategies to consumers, which also mean that countries must attempt to promote healthy lifestyles vigorously. This is particularly going to be a huge task, when we consider the fact that the combined

spending on the advertising of Coca-Cola and PepsiCo, was more than the entire budget of the WHO for the years 2002-03 (Nestle, 2006).

Such transnational corporations cause 600 million urban-based 5-14 year olds to spend more than US$200 billion each year on themselves. This in turn influences parental spending, a large proportion of which is spent on fast food, soft drinks, cigarettes, and alcohol (Beaglehole & Yach, 2003). Beaglehole and Yach further emphasize that these transnational companies exploit weak regulatory environments and use deceptive advertising to reach their target. For instance, transnational tobacco companies see the potential of growth in sales in developing countries and aggressively pursue marketing campaigns particularly those targeted at women and youth. Therefore, it is important that there are advertising restrictions, control of packaging and labeling, and product regulation. In Fiji, Coca-Cola sponsors national school sport tournaments on a regular basis. These Fiji school tournaments get television coverage. They target young people as a market so that they establish loyalty early. Pillai (2007) commented that while Fiji Coke Games in athletics are enjoyable to watch it is also a graphic example of transnational commercialization and globalization. Obesity-promoting environments need to be reduced, as obesity is the most powerful risk factor for diabetes, created by excessive caloric intake, changing diet, and physical inactivity (WHO, 2003). Pacific Islands traditional diets of staple root vegetables (sweet potato, taro, yams, cassava) that are high in fibre and rich in starch, are increasingly replaced by manufactured food that is low in fibre.

Nauru, with a prevalence rate of 34.4 per cent for diabetes, is one of the highest ever recorded in the world (Coyne, 2000; Serjeantson, 1989; WHO, 2003). However, when Nauru's health reports from 1923 to 1966 were investigated only one case of diabetes in 1937 was found (Serjeantson, 1989). This is an example of the enormity of the change in the Pacific Islands towards high non-communicable disease incidences. Rates of diabetes in many Pacific Island Countries are nine to ten times higher than Western countries (Coyne, 2000; WHO, 2003). Even more worrying is, of the top ten most obese countries in the world, Pacific Island Countries make up eight of those (Streib, 2007). These are not only statistics but also real issues that need focused attention from all Pacific Island nations. The fact is that chronic diseases such as diabetes and heart disease are not transmittable via an infectious agent, in the way infectious diseases ravaged the islands before, and mostly arrested effectively today. But the behaviors that predispose to these non-communicable diseases can be transmitted via advertising, product marketing and social interactions (Huynen, Martens, & Hilderink, 2005). Thus, sustained, creative and relevant communications strategies are required to penetrate the primary settings such as the home, pre-schools, and schools to curb unhealthy food advertisements aimed at children.

Another concern in television viewing relates to the inappropriate content that children are watching. In Fiji, there is concern over certain television programs put on during prime time when children are still awake, such as *The Secret Life of an American Teenager*. This program, according to Sugutanaivalu (2011), depicts sexual behavior that parents would not like their children to be engaged in. Sugutanaivalu also stresses that with increasing incidences of teenage pregnancy and rape in Fiji, such television programs do not contribute to the moral development of children. Morrell (2011) supports the sentiments of

Sugutanaivalu, adding that many programs aired by Fiji television during early evenings such as *Shortland Street* and *Groove Thang* have negative influence on children. Morrell suggests that Fiji parents and the viewing public should have a Mass Media Network to advocate programs that are healthy for children. Singh (2011) also advocates regulating television in Fiji to enable programs children watch to have children's contents on science, education, drama, sports, and other appropriate programs that children and parents can watch comfortably together. A major obstacle, according to Lockington (2011) is that the Fiji Censor Board only censors movies for cinemas but not for television programs. This Censor Board should also be responsible for censoring television programs.

Moreover, 69 per cent of indigenous Fijian girls have indicated in a survey to having dieted as a means of emulating television characters. They often articulate the desire to lose weight to be like Western television characters (Elbourne, 2011). Anschutz, Engels, Leeuwe, and Strien (2009), who studied 245 girls aged 7 to 9, also found that watching soaps and music television is related to higher thin ideal internalization. A high thin ideal internalization leads to higher body dissatisfaction and restrained eating. Unrealistic Western stereotypes of female attractiveness influences young people's bulimic eating behavior. These implications of excessive television viewing and the high incidence of television watching in this Fiji study indicates that innovative ways of steering children away from commercial television and regulated control of television contents, may have meaningful effect in reducing childhood obesity and other negative impacts.

The only significant difference between the genders, against all variables in this Fiji study, is that girls are helping out in 'household chores' more than boys do. Assaad, Levison, and Zibani (2010) also found in Egypt that girls substantially do more domestic work than boys are. They also were able to connect the lower rates of school attendance of Egyptian girls to the much higher rates of household chores. Hsin (2007) who studied 2, 929 Indonesian students concluded that by 18 years of age, girls spend an hour more than boys in daily chores and as a result, have significantly lesser leisure time. Across all age groups, Indonesian girls also do more household chores than boys do. However, when gender gap in Indonesia in schooling is investigated, unlike the Egyptian study, it is not significant. Indonesian girl's higher participation in household chores than boys does not affect their attendance at school, while it does in the Egyptian study. The Fiji study does not investigate the relationship between household chores and school attendance, but for a developing country, Fiji's literacy rate is more than 92 per cent and a primary school enrollment of 98 per cent (Prasad, 2005), are rates other developing countries can only envy. It can be said then that the higher participation in household chores by Fiji girls than boys would not affect girls' school attendance.

Dunlevy (2010) reports that one in three Australian teenage boys are doing absolutely no household chores. Increasingly, more teenage girls also do not want to contribute to household chores. If their brothers do not help in household chores, why should they? This is what many girls in Australia ask. Girls are catching up to their brothers in Australia when it comes to dodging household chores (Lunn, 2010). The situation is similar in Spain. Pena, Mendez, and Torio (2010) reported that children who participate in household chores are becoming

occasional and scant. If they do so, it is usually centred on 'their own' task than 'communal' chores that benefits the household. This is not conducive to building a family environment that is democratic, equitable, participatory, and tolerant. Parents should not allow a situation that leads children to being incapable of coping independently. Schoefer (2005) emphasizes that housework can also teach children important life lessons. Household tasks can give children the satisfaction of contributing to the greater good of the family. It can also be a way to show respect for other family members, cultivate an appreciation of the home, and develop independence. Schoefer also suggests that household chores need to be distributed evenly for daughters and sons. Furthermore, it is important to compliment children when they contribute to housework such as washing, cooking, or watering plants.

Conclusion

It may be said that out of the various developments in the last millennium, there is probably none of greater impact on many children than television. Children around the globe spend enormous time on television and electronic media. It is no different in Fiji. The paper had thought that television viewing may be lower in the sampled rural schools, but it is just as high as the urban children do. As access to electricity and television gets to rural communities, watching television has become children's most popular after school activity in both rural and urban situations. As children spend excessive time watching television after school, the danger of relying on the media for social norms and values is an issue. Transnational corporations and advertisers target children in food advertisements and television viewing itself is associated with energy surplus intake and increased gain in BMI. Control of the television environment can help reduce the obesity trends by getting children to be involved in activities that shape positive development among children. The act of watching television is a sedentary activity so finding ways to channel interests into active play and household activities, such as helping to clean the lawn and gardens, will go a long way into promoting an active lifestyle. Children are increasingly being indoors in urban environments than playing outside. Sports clubs can provide a venue for children to be physically active after school. Cities and towns can create environments and recreation spaces by which children can use to play. Interventions can, therefore, be made at home, schools, towns and villages, and at government levels to ensure children have opportunity to be physically active after school.

It is recommended that children receive at least 30 minutes of moderate to vigorous physical activity most days of the week. Therefore, it is suggested that city and town councils and communities provide safe spaces to play in suburbs to enable recreation and tp promote walking, bicycling and other forms of leisure. It is imperative that parents monitor their children's television viewing, limiting them to no more than 2 hours per day and encouraging their children to be engaged in alternative tasks such as hobbies, reading, household chores or sports. Moreover, the government needs to regulate television programs so that the content is appropriate for children and commercial food advertising targeted at children is focused on the promotion of healthy eating. Finally, evidenced by the low participation rate in after school sport in this study, it is recommended that

sporting federations and clubs organize supervised sporting activities for children and youth after school, that are positive, inclusive and developmentally appropriate.

References

Anschutz, D., Engels, R., Leeuwe, J. V. & Strien, T. V. (2009). Watching your weight? The relationship between watching soaps and music television and body dissatisfaction and restrained eating in young girls. *Psychology and Health, 24*(9), 1035-1050.

Assaad, R., Levison, D. & Zibani, N. (2010). The effect of domestic work on girls' schooling: Evidence from Egypt. *Feminist Economics, 16*(1), 79-128.

Bautolu, W. (2008, June 9). Police on trail of 14-year-old's relative. *Fiji Sun*, p. 1 & 3.

Beaglehole, R. & Yach, D. (2003). Globalisation and the prevention and control of non-communicable diseases: the neglected chronic diseases of adults. *Lancet. 362*(9387), 903-908.

Belloti, M.G. (2005) After-school programs: The sky is the limit. *Sheriff, 57*(6), 57.

Belton, S. & Donncha, C. M. (2010). Reliability and validity of a new physical activity self-report measure for younger children. *Measurement in Physical Education and Exercise Science, 14*(1), 15-28.

Biumaiono, S. (2006, October 7) Students in court on sex charges. *Fiji Times*, p.7.

Bola, J. (2006, October 29). Rival schools renew feud. *Fiji Times,* p. 3.

Calabro, M. A., Welk, G. J., Carriquiry, A. L., Nusser, S. M., Beyler, N. K. & Mathews, C. E. (2009). Validation of a computerized 24-hour physical activity recall (24PAR) instrument with pattern-recognition activity monitors. *Journal of Physical Activity and Health, 6*(2), 211-220.

Chand, S. (2010a, August 15). Watch your kids: Death triggers alarm bells as school holiday looms. *Fiji Times,* p. 3.

Chand, S. (2010b, December 1). Child rapist eligible for parole after 12 years. *Fiji Times,* p. 7.

Chen, M., Liou, Y. & Wu, J. (2008). The relationship between TV/Computer time and adolescents' health-promoting behaviour: A secondary data analysis. *Journal of Nursing Research, 16*(1), 75-84.

Colchico, K.; Zybert, P. & Basch, C. E. (2000) Effects of after-school physical activity on fitness, fatness, and cognitive development. *American Journal of Public Health, 90*(6), 977-978.

Coyne, T. (2000). Lifestyle Diseases in Pacific Communities, Noumea: Secretariat of the Pacific Community.

Dale, D.; Corbin, C.B. & Dale, K.S. (2000) Restricting opportunities to be active during school time: Do children compensate by increasing physical activity levels after school? *Research Quarterly for Exercise and Sport, 71*(3), 240-248.

Delaivoni, R. (2006) Form five student jailed for theft. *Fiji Daily Post, 18*(5),1-2.

Dunlevy, S. (2010, September 22). Generation Zzzzzzzzz, it's time to wake up to real life. *The Daily Telegraph,* p. 25.

Elbourne, F. (2010, December 17). Child sex for cash. *Fiji Times,* p. 3.

Elbourne, F. (2011, January 10). TV dictates habits: Study say 74 per cent of population feel they are too big or fat. *Fiji Times,* p. 4.

Evans, J. (2003) Changes to (primary) school recess and their effect on children's physical activity: An Australian perspective. *Journal of Physical Education New Zealand, 36*(1), 53-62.

Ferrin, D. & Amick, S. (2002) San Diego's 6 to 6: A community's commitment to out-of-school time. *New Directions for Youth Development, 2002*(94), 109-117.

Francis, L. J. (1999). The benefits of growing up in rural England: a study among 13-15-year-old females. *Educational Studies, 25*(3), 336-341.

Haigh, G. (2005, October 28). Out-of-school clubs get into the rhythm. *The Times Educational Supplement,* London, p. 27.

Hancox, R. J. & Poulton, R. (2006). Watching television is associated with childhood obesity: But is it clinically important. *International Journal of Obesity,* 30, 171-175.

Heymann, J. (2000) What happens during and after school: Conditions faced by working parents living in poverty and their school-aged children. *Journal of Children & Poverty, 6*(1), 5-20.

Hsin, A. (2007). Children's time use: Labor divisions and schooling in Indonesia. *Journal of Marriage and Family, 69*(5), 1297-1307.

Huynen, M; Martens, P. & Hilderink, H. (2005). The health impacts of globalisation: a conceptual framework . *Globalization and Health. 1*(14), 1-24.

Jago, R., Fox, K. R., Page, A. S., Brockman, R. & Thompson, J. L. (2010). Parent and child physical activity and sedentary time: Do active parents foster active children? *BMC Public Health,* 10, 194-202.

Kelly, B., Halford, J., Boyland, E. J. & Chapman, K. (2010). Television food advertising to children: A global perspective. *American Journal of Public Health, 100*(9), 1730-1736.

Khan, Z. (2010, October 18). Sports inspiration. *Fiji Sun,* p. 6.

Lalakato, A. (2006, January 18). Parents need to monitor children. *Fiji Times,* p. 5.

Lokington, A. (2011, January 29). Movie censors. *Fiji Times,* p. 9.

Loucaides, C. A.; Chedzoy, S. M. & Bennett, N. (2004). Differences in physical activity levels between urban and rural school children in Cyprus. *Health Education Research, 19*(2), 138-147.

Louie, L. & Chan, L. (2003). The use of pedometry to evaluate the physical activity levels among preschool children in Hong Kong. *Early Child Development and Care, 173*(1), 97-107.

Lunn, S. (2010, September 21). Teenage 'domestic uselessness' on the rise. *The Australian,* p. 5.

McHale, S. M., Crouter, A. C. & Tucker, C. J. (2001). Free-time activities in middle childhood: Links with adjustment in early adolescence. *Child Development, 72*(6), 1764-1778.

Manzo, K.K. (2006, March 8) Demand to add academics to after-school care grows. *Education Week*, p.7.

Marau, M. (2008, July 16). Boy taken in rape bid claim. *Fiji Times*, p. 3.

Marau, M. (2010, March 8). Boy bashed: Police, social welfare step in as child is hospitalised. *Fiji Times,* p. 1.

Mayall, B. & Hood, S. (2001) Breaking barriers – Provision and participation in an out-of-school centre. *Children & Society, 15* (2), 70-81.

McCarthy, C. (2005) Does your child get enough downtime? *Parenting, 19*(8), 190-195.

Morrell, P. (2011, January 23). Bad TV influence. *Fiji Times,* p. 6.

Morrissey, K.M. & Werner-Wilson, R.J. (2005) The relationship between out-of-school activities and positive youth development: An investigation of the influences of communities and family. *Adolescence, 40*(157), 67-85.

Nestle, M. (2006). Food industry and health: mostly promises, little action. *The Lancelet, 368*(9535), 564-566.

Niumataiwalu, A. (2009, November 20). 15 pc rise in child abuse. *Fiji Times,* p. 3.

Noam, G.G.; Miller, B.M. & Barry, S. (2002). Youth development and after-school time: Policy and programming in large cities. *New Directions for Youth Development, 2002*(94), 9-18.

Parsons, T. J., Manor, O. & Power, C. (2008). Television viewing and obesity: A prospective study in the 1958 British birth cohort. *European Journal of Clinical Nutrition,* 62, 1355-1363.

Patriarca, A., Giuseppe, G. D., Albano, L, Marinelli, P. & Angelillo, I. F. (2009). Use of television, video games, and computer among children and adolescents in Italy. *BMC Public Health, 9*(139), 1-10.

Pedersen, S. (2005) Urban adolescents' out-of-school activity profiles: Associations with youth, family, and school transition characteristics. *Applied Development Science, 9*(2), 107-124.

Pena, J. C., Mendez, C. R. & Torio, S. (2010). Family and socialization processes: Parental perception and evaluation of their children's household labor. *Journal of Comparative Family Studies, 41*(1), 131-152.

Pillai, R. (2007, May 2). Coke games. *Fiji Times,* p. 6.

Plotnikoff, R. R., Bercovitz, K., & Loucaides, A. C. (2004). Physical activity, smoking, and obesity among Canadian school youth: Comparison between urban and rural schools. *Canadian Journal of Public Health. 95*(6), 413-418.

Potvin, L.; Gauvin, L. & Nguyen, N. M. (1997). Prevalence of stages of change for physical activity in rural, suburban and inner-city communities. *Journal of Community Health, 22*(1), 1-13.

Prasad, J. (2005, March 4). Our literacy rate is enviable, says PM. *Fiji Times,* p. 5.

Raicola, V. (2010, November 6). All night stay in e-cafes. *Fiji Times,* p. 26.

Ralogaivau, T. (2008, December 12). Drug abuse continues to worry. Fiji Times, p. 10

Ralogaivau, T. (2009, January 2). Gang rape. *Fiji Times,* p. 1.

Riggs, N.R. & Greenberg, M.T. (2004) After-school youth development programs: A developmental-Ecological model of current research. *Clinical Child and Family Psychology Review, 7*(3), 177-190.

Rina, S. (2010, November 20). Stop abuse of children. *Fiji Times,* p. 2.
Sam, A. S. (2008, June 29). Student hospitalised after sniffing glue. *Fiji Sun,* p. 2.
Sam, A. S. (2008, October 26). Students warned. *Fiji Sun,* p. 4.
Schoefer, C. (2005). Pitchinh in: what girls learn through housework. *Daughters, 10*(5), 4.
Schrieber, J.B. (2002) After-school pursuits, ethnicity, and achievement for 8th – and 10th-grade students. *Journal of Educational Research, 96*(2), pp. 90-100.
Senilagakali, J. (2006, February 9). Junk food laws could battle obesity. *Fiji Times,* p.3.
Serjeantson, S. (1989). Health Planning and Diabetes Mellitus in the Western Pacific, National Centre for Development Studies, Canberra: ANU.
Shah, B.P. & Karpman, M. (2006, May 1) Summit to focus on afterschool programs. *Nation's Cities Weekly,* Washington, *29*(18), 1.
Short, J. (2002) Out-of-school-time programs: At critical juncture. *New Directions for Youth Development, 2002*(94), 119-123.
Simpkins, S.D.; Rike, M.; Huston, A.C. & Eccles, J.S. (2005) Predicting participation and outcomes in out-of-school activities: Similarities and differences across social ecologies. *New Directions for Youth Development, 2005*(105), 51-69.
Singh, D. (2011, January 23). TV programs. *Fiji Times,* p. 6.
Singh, M. (2011, January 12). Rise in rape cases. *Fiji Times,* p. 3.
Sonneville, K. R. & Gortmaker, S. L. (2008). Total energy intake, adolescent discretionary behaviours and the energy gap. *International Journal of Obesity, 32*(6), 519-527.
Stanley, R., Boshoff, K. & Dollman, J. (2007). The concurrent validity of the 3-day physical activity Recall questionnaire administered to female adolescents aged 12-14 years. *Australian Occupational Therapy Journal, 54*(4), 294-302.
Stiehl, J. & Galvan, C. (2005) School-based physical activity programs. *Journal of Physical Education, Recreation & Dance, 76*(9), 25-31.
Streib, L. (2007). *World's fattest countries*. Retrieved January 2, 2007. From http://www.forbes.com/2007/02/07/worlds-fattest-countries-forbeslife-cx_ls_0208worldfat_…
Sugutanaivalu, N. M. (2011, January 21). Bad TV influence. *Fiji Times,* p. 8.
Teri, P. (1996) Play; An important component of preventative behaviour management. *Paper presented at the Annual Conference of the Southern Early Childhood Association,* March 11-16, Little Rock, Arizona, USA.
Vanden Bergh, B. (1997). Going to primary school in a city or in a village: Does it make any difference? Paper presented at the *Interdisciplinary Conference on Urban Childhood,* 9-12 June, Trondheim, Denmark.
Vannoy, W. (1988). Latchkey intramurals. *Journal of Physical Education, Recreation & Dance, 59*(4), 82-84.
Vinluan, M.H. (2005) After-school programs alter lives of at-risk youth. *Parks & Recreation, 40*(8), 12-15.
Volau, N. (2010, October 24). Boy, 8, dies climbing through window. *Fiji Sun,* p. 2.

Vunileba, A. (2006, September 15) Four students admit violent robbery. *Fiji Times*, p.1.

Won, S. J. & Han, S. (2010). Out-of-school activities and achievement among middle school students in the U.S. and South Korea. *Journal of Advanced Academics, 21*(4), 628-661.

Ward, A. (2006, June 24) After school. *Fiji Times*, p.11.

Watson, D. L.; Poczwardowski, A. & Eisenman, P. (2000) After-school physical activity programs for adolescent girls. *Journal of Physical Education, Recreation & Dance, 71*(8), 17-21.

Wells, L. & Blendiger, J. (1997) Action research: How children in the fifth grade spend their time outside of school. *Paper presented at the Annual Meeting of the Mid-South Educational Research Association,* Nov. 12-14, Memphis, USA.

WHO. (2003). Tonga commitment to promote healthy lifestyles and supportive environment. *Ministers of Health for the Pacific Island Countries,* 9-13 March.

Williamson, K.M. & Georgiadis, N. (1992) Teaching an inner-city after-school program. *Journal of Physical Education, Recreation & Dance, 63*(8), 14-18.

Wilson, C. (2008, October 9). Students sent home for drinking home-brew. *Fiji Sun*, p. 2.

Wise, M. (2008, October 21). Students in sex trade. *Fiji Times,* p. 10.

Witt, P.A. (2001) Insuring after-school programs meet their intended goals. *Parks & Recreation, 39*(9), 32-52.

Zhang, J.J. & Byrd, C.E. (2005) Enhancing the quality of after-school programs through effective program management. *Journal of Physical Education, Recreation & Dance, 76*(8), 5-15.

Zimmerman, F. J. & Bell, J. F. (2010). Associations of television content type and obesity in children. *American Journal of public Health, 100*(2), 334-340.

Chapter 8: Evidence-informed Nutrition Policy Intervention: The Case of Micronutrient Deficiency in Fiji and the Role of Education

Jimaima T. Schultz

Introduction

Malnutrition, resulting from nutrient deficiencies, increases morbidity and mortality, affects growth and development, and has long term debilitating effects on people. This chapter examines Fiji's micronutrient problems as outcomes of numerous interrelated factors embedded in the broader socio-economic systems. Women and children are the focus of this report because their health is an indicator of the health of a nation. The impact of economic development on diet is discussed as well as the relationship between poverty, food security and micronutrient deficiencies.

The data provided as evidence are drawn from two nutrition studies: the 2004 National Nutrition Survey of Micronutrient status among women of child bearing age 15-45yrs, and the 2008 Micronutrient Survey of children 6 months- <5 years. The results showed that iron deficiency anaemia is Fiji's biggest micronutrient problem with an overall rate of 32% in women and 50% in children less than 5years of age. By ethnicity, more Indo-Fijian both women and children were anaemic. Multiple-micronutrient deficiencies also exist with 15% of Indo-Fijians and 2.4% in Fijians. Among all children under 5 years old, the rate of multiple-micronutrient deficiencies was 40%. These provided evidence which can be utilized to inform nutrition policy intervention strategies.

Proper diet is a key determinant of health throughout the lifecycle (Gibney et al., 2004) and extends from one generation to the next (Boyle & Holben, 2006). The diet which includes the foods that we eat regularly provides the body with the necessary nutrients. Nutrients are chemical substances in food that provide energy, structure, and help regulate body processes (Smolin & Grosvenor, 2007). People eat food, not nutrients but it is the combination of amounts of nutrients in consumed food that determine health (Gibney et al, 2002). Research has demonstrated that poor nutrition in women during early pregnancy impairs the

development of the foetus (Gautum, 2006; Martorell, 1996; Uauy & Solomons, 2006). Infants born of malnourished mothers are more likely than children of healthy women to be ill, to have birth defects, and retarded physical and mental development (Allen, 2001; Hackman, 1983). For female children, a poor start in life means that female children are likely to grow up poorly equipped to support normal pregnancy resulting in bearing poorly developed children (Boyle & Holben, 2006). Impaired intrauterine growth is likely to 'program' the foetus for chronic diseases such as coronary heart diseases, hypertension, Type 2 Diabetes in adult life (FNS, 2010; Godfrey et al, 2000). These chronic diseases are the major causes of death among the economically active population in developing countries such as Fiji (MOH, 2008; WHO, 2005).

According to the FAO (2005), about 1 in 6 persons in the developing world are undernourished due to low food availability, poor health services, unhealthy environments, lack of education, poor knowledge, and inappropriate nutrition care. In Fiji, a number of health and nutrition surveys conducted in recent years showed that there is transition in terms of nutrition and health. The country still has to deal with communicable and deficiency diseases on the one hand, while on the other, non-communicable diseases (NCD) are also present (MOH, 2002; Schultz et al, 2007; Schultz & Vatucawaqa, 2009; Utter, Faeamani et al, 2008). These health problems have been attributed to major changes in diet and lifestyle as a result of economic development and urbanization (Kennedy et al, 2004; Coyne, 2000). Unfortunately, while economic development had brought improvement in standards of living and economic wealth in developing countries including Fiji, it has not been evenly distributed across populations (Escobar, 1995). As noted by Narsey (2008) and Barr (2003), poverty and poor nutrition are closely linked and has increased during the last 3 decades in Fiji.

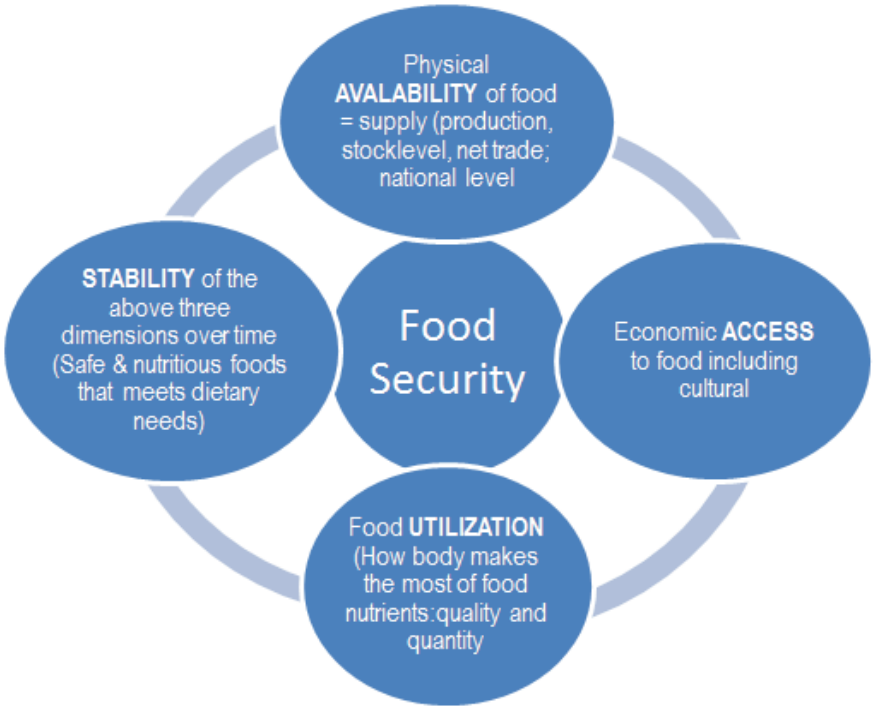
Improving nutrition is the most fundamental challenge to human welfare and economic growth in the developing world (Benson, 2008; Meerman, 2008; Strauss, 1995). It is a developmental priority need, requires the input from other sectors public and private such as agriculture, trade and commerce. Education has a key role to play in improving nutrition in Fiji but needs to take on the challenge more. This chapter focuses on the case of women (mothers) and children in Fiji because their health impact on the nation as a whole. They are the most physiologically and culturally vulnerable groups as a result of economic development, natural and man-made disasters. Many of the health problems faced by adult women have their origins in childhood (WHO, 2009). Therefore, if women and children are healthy, we will have a healthy nation.

Malnutrition—An Indicator of Other Situations

Malnutrition is a general term used to describe a range of nutritional conditions which include under-nutrition or imbalanced diet (resulting in deficiency), and over-nutrition or too much food (nutrients) than the body needs for good health (Gibney et al, 2005, Thomas, 2001). A major contributing factor to the problem has been attributed to food insecurity resulting from non-food reasons such as poverty, lack of education, lack of land for food gardens, poor sanitation, worm infestation and poor hygiene, as well as prioritizing other needs such as possessions, traditional obligations and others (Ecker & Breisinger, 2012;

Meerman, 2008; Mason et al., 1995). Figure 1 illustrates Food security/insecurity concept as a comprehensive multi-dimensional idea with 4 major elements or pillars: availability, access, utilization, and stability or constancy (FAO, 1996):

Figure 1: Dimensions of food security from a nutritional perspective



Source: FAO 2008

The four elements are interconnected: foods must be available; people must be able to access them (garden, money to purchase food, and culturally acceptable food); the body must be able to use them effectively and there should be constancy of the first three elements. Traditionally people in Fiji obtained food from their own garden (Schultz, 1997). Today, however, access to food is influenced by other forces: market factors, prices and purchasing power which is related to employment (Kennedy et al, 2004).

The outcome of food nutrient 'utilization' depends on whether the body is physiologically healthy to make use of the food nutrients and if sufficient quality and quantity (of nutrients) are present in a meal (Ecker & Breisinger, 2012). Although vitamins and minerals, micronutrients present in vegetables and fruits, are needed only in very small amounts their presence are significant in that they affect how the body effectively use (or not) the other nutrients (carbohydrate, protein, fat and other vitamins and minerals) (Gibney et al, 2002).

Maternal and Infant Health—an Indicator of a Nation's Health

The health of a nation is often judged by the health status of its mothers and children (Boyle & Holben, 2006). A common indicator of a nation's health,

according to epidemiologists, is infant mortality rate (IMR) per 1,000 live births. The leading causes of death among infants in developing countries are pre-term delivery and low birth weight, birth defects, and maternal complications (Boyle & Holben, 2006). Adequate nutrition plays a critical role in healthy pregnancy outcomes (American Dietetic Association, 2002). UNICEF (2005) showed disparities in infant mortality rates even in industrialized countries. For example 3.0 for Denmark, Norway, Japan and Sweden, while IMR for the United State was 7.0 even though the US spent more money on health care than most other countries. The same report showed New Zealand's IMR was 5.0, while Australia had 6.0. These averages hide the disparities that exist between ethnic groups, between poor and non-poor. For example, IMR for African-American infants in the US was 13.8, double the rate for whites. The IMR for Fiji, however, has decreased from 20.76 in 2005 to 13.1 in 2008 (MOH, 2008). Although Fiji is doing relatively well in terms of reducing its IMR, there is still room for improvement.

Increased risk of morbidity and death such as incidence of low birth weight (LBW) has been observed since 1990s even in the US (NCHS, 2003). The difference in LBW rates between Africa-American and white, poor and non-poor have remained largely unchanged. In Fiji, the 2004 nutrition survey showed that 10.2% of children were born with low weight and the majority of these were Indo-Fijian children. A high proportion of children in rural areas also had low weight at birth which puts the infant at a disadvantage to start with. As noted by Wootton (2008), English at al., (1997), and Tomkins and Watson (1989), a well nourished body has an immune defense system that effectively protects against tissue invasion from infection hence people are able to fight off diseases much more successfully and are able to live longer with improved life expectancy. In relation to the role and effect of modern medicine and antibiotics, Wootton (2008) reported that statistical studies that have attempted to work out what the relative contribution of two factors, improvements in resistance on the one hand, and improvements in therapy on the other suggests that of the 35-year gain in life expectancy, improved nutrition contributed 80% and only 20% is due to modern medicine. In other words, while the impact of modern medicine has been significant, improvements in life expectancy is primarily due to improvements in nutrition.

Situation among Women and Children in Fiji—The Evidence

This section describes the current rates of iron deficiency anaemia, iron, vitamin A and zinc status in women of child bearing age (CBA) from the 2004 National Nutrition Survey and the 2008 micronutrient study of children 6 months – under 6 years of age. Firstly the data on women will be described and then the data on children will follow. The discussion that follows will refer to Fijians of Indian origin as Ind0-Fijian or Indian and Fijian of indigenous origin as 'Fijian'.

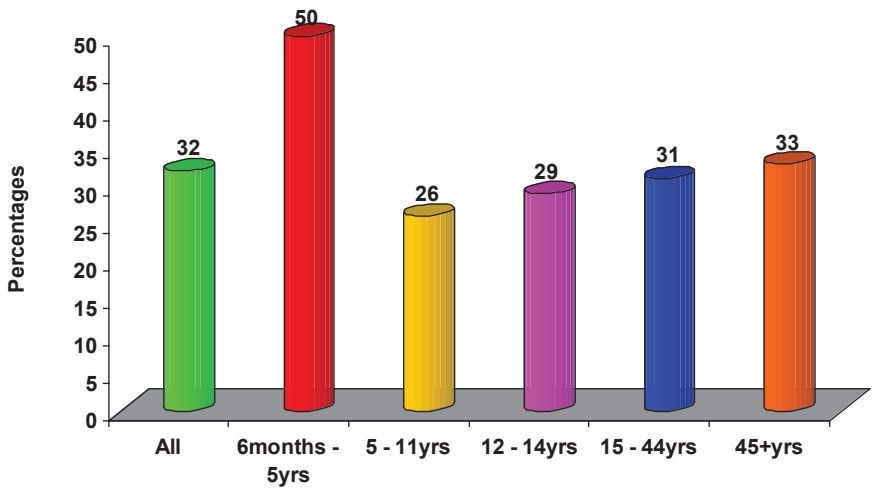
Micronutrient Status among Women of Child Bearing Age (CBA) 15-45yrs.

Anaemia status

Anaemia, the final stage of iron deficiency, causes a reduction in concentration of haemoglobin in the red blood cells (Bowman & Russell, 2006; Gibney et al, 2005; Gibson, 2005). It is one of the biggest nutrient deficiency problems in Fiji and has been for many years (NNS 1982, 1993 & 2004).

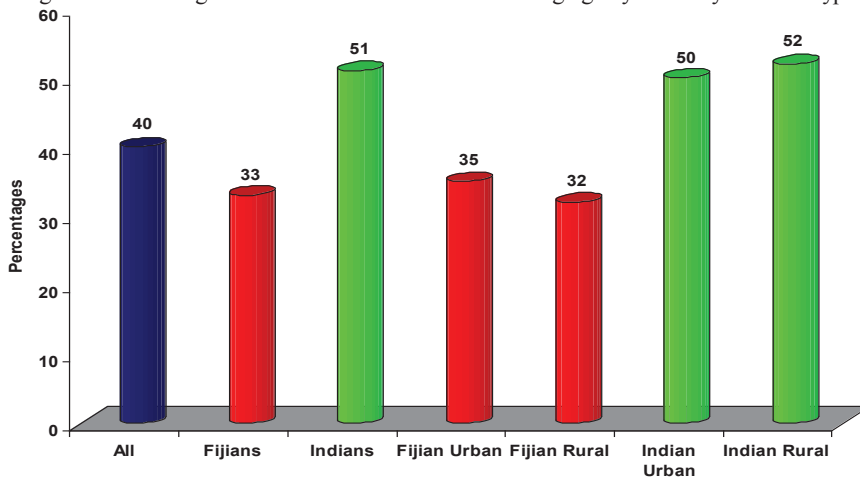
The 2004 National Nutrition survey (Fig.2) showed the overall rate of anaemia, the haemoglobin level, among the population was 32%. Examined by age group, the worst affected were children 6months-<5yrs (50%), where one in every two were anaemic. Analysis also showed that the overall population rate had increased from 27% in 1993 to 32% in 2004 (Schultz et al., 2007). This trend is a course for concern.

Figure 2: Percent Anaemia in population by age groups



Further examination of the data on women of child bearing age (CBA) 15-45 yrs (Figure 3) showed that at least 50% Indo-Fijian women were anaemic. There was little difference in the rates for Indo-Fijian women in rural and urban areas.

Figure 3: Percentage of anaemic women of child bearing age by ethnicity and area type

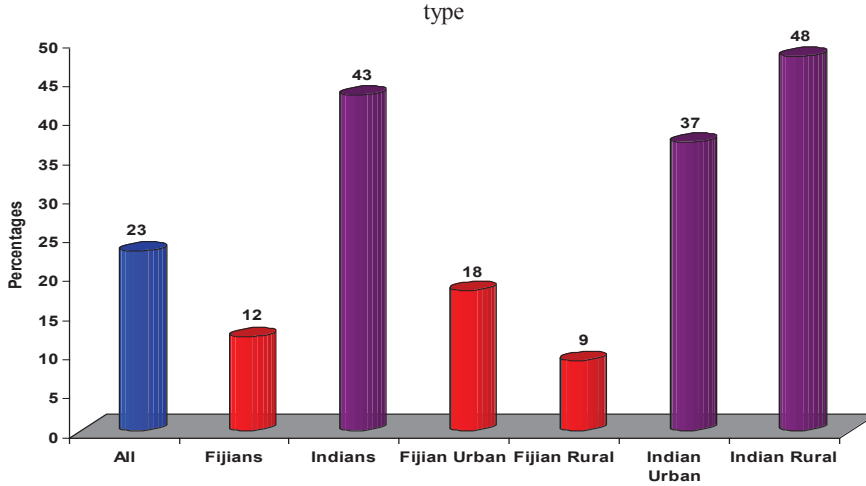


Iron Status

Nutrition iron deficiency occurs when the body requirements cannot be met by iron absorbed from the diet and it appears to be the main contributing factor to anaemia in Fiji. Iron deficiency is one of the leading risk factors for disability and death worldwide (Zimmermann & Hurrell, 2007). Figure 4 shows that the overall rate of iron deficiency among women of child bearing age as 23% (Harvey & Vatucawaqa, 2007).

More Indo-Fijian women (43%) were iron deficient compared to Fijian women (12%). Slightly more Indo-Fijian women living in rural area were iron deficient (48%) compare with those living in urban areas (32%). The reverse trend was observed in Fijian women where twice as many urban dwellers (18%) compared to rural dwellers (9%) were iron deficient (Harvey & Vatucawaqa, 2007).

Figure 4: Percentage of iron deficient women of child bearing age by ethnicity and area type

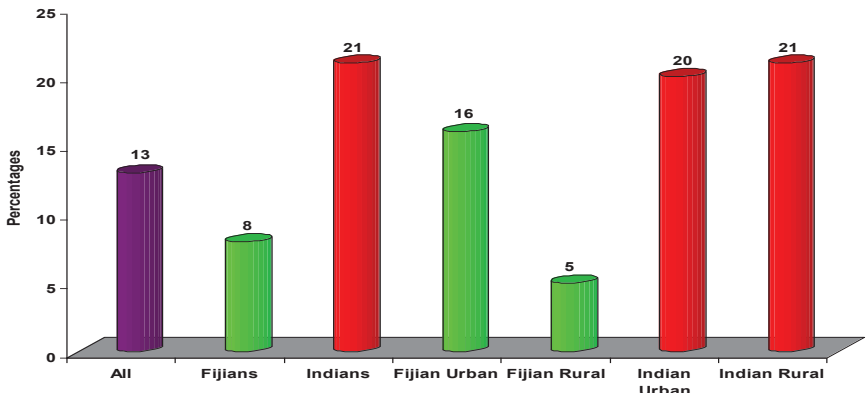


Vitamin A Status

Vitamin A is needed to prevent infections, keep eyes healthy and help children grow properly (Boyle & Holben, 2006; Mann & Truswell, 2002; Gibney et al, 2002). Early signs of vitamin deficiency include growth failure, loss of appetite, impaired immune responses with lowered resistance to infection, impaired iron use that leads to anaemia. Clinical signs such as night blindness develop when liver reserves are almost exhausted (Gibney et al, 2005).

Figure 5 showed women who were deficient in vitamin A (Harvey & Vatucawaqa, 2007). The overall rate among women of child bearing age was 13%. More Indo-Fijian women were vitamin A deficient (21%) compared to Fijians (8%). There were similar rates among Indo-Fijians living in urban and rural areas (20% and 21%). Relatively higher rates of vitamin A deficient Fijian women lived in urban areas (21%) compared to those in rural areas (16%). Although the rate of vitamin A deficiency is not as high as anaemia, it is still of concern.

Figure 5: Percent of vitamin A deficient women of child bearing age by ethnicity and area type



Zinc Status

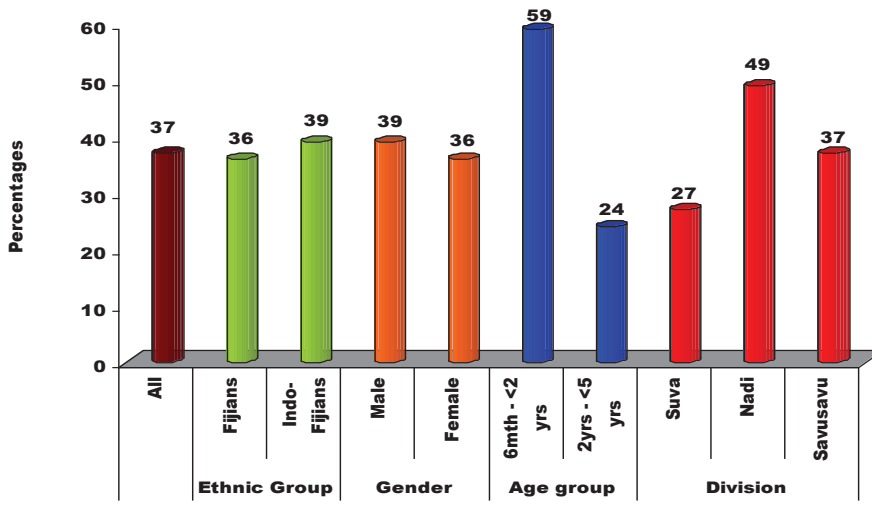
Any level of zinc deficiency is of concern because of its importance in protein synthesis and gene expression, and its role in the proper function of vitamin A and D (Gibney et al 2002). Zinc deficiency contributes to anaemia (Smolin & Grosvenor, 2008). The overall zinc deficiency rate for women of child bearing age was 39%. The results also showed that urban Fijians had higher rates (46%) than Indian women (31%). Fijian women living in rural areas had higher rates (45%) than Indian women (31%) in rural areas. The results showed that Fijian women were found to have higher rates of zinc deficiency than their Indian counterparts (Harvey & Vatucawaqa, 2007)

Micronutrient Status of Children 6 months-<5 years

Anaemia status

Anaemia among children under 5 yrs was also high (Figure 6). One in every 3 children in the survey were anaemic. There were no differences in the rates by ethnicity and gender. However, relatively more children under 2 years (59%) were anaemic. By division, Nadi had more children with anaemia (49%) compared with children in Suva and Labasa (Schultz & Vatucawaqa, 2009).

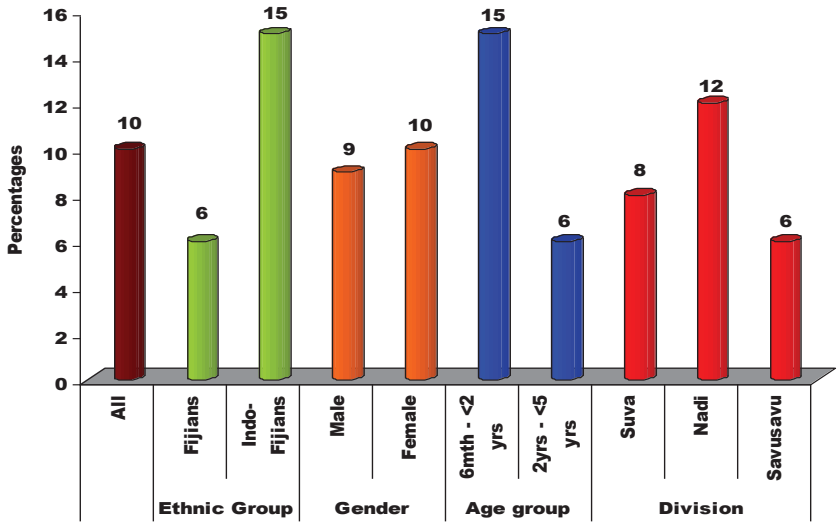
Figure 6: Percentage of Children <5yrs with anaemia by ethnicity, gender, age group and division.



Iron Status

Iron deficiency appeared relatively low compared with anaemia (Figure 7). However, Indo-Fijian children and all children under 2 years had the highest rates at 15% equal (Schultz & Vatucawaqa, 2009).

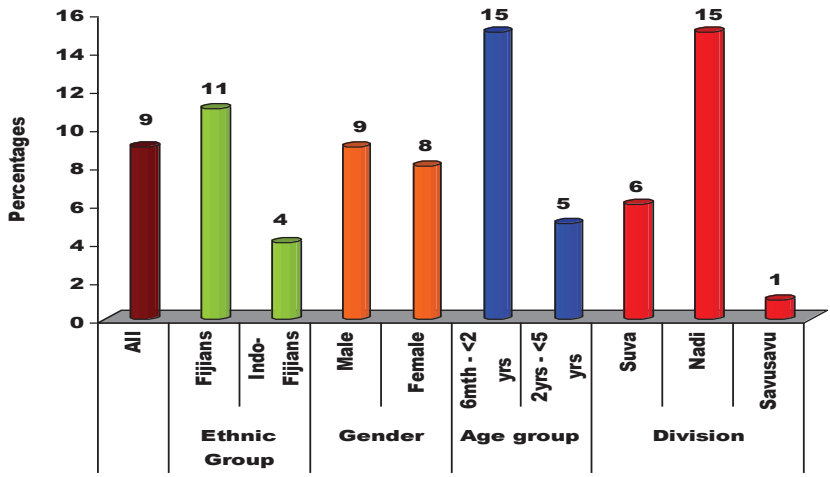
Figure 7: Percentage of children with iron deficiency by ethnicity, gender, age group and division



Vitamin A Status

Figure 8 showed that 15% of children under 2 years of age were vitamin A deficient. Analysis also showed that for every 10 children surveyed, at least 3 were at high risk of becoming vitamin A deficient (Schultz & Vatucawaqa, 2009).

Figure 8: Percentage of children with vitamin A deficiency by ethnicity, gender, age group and division

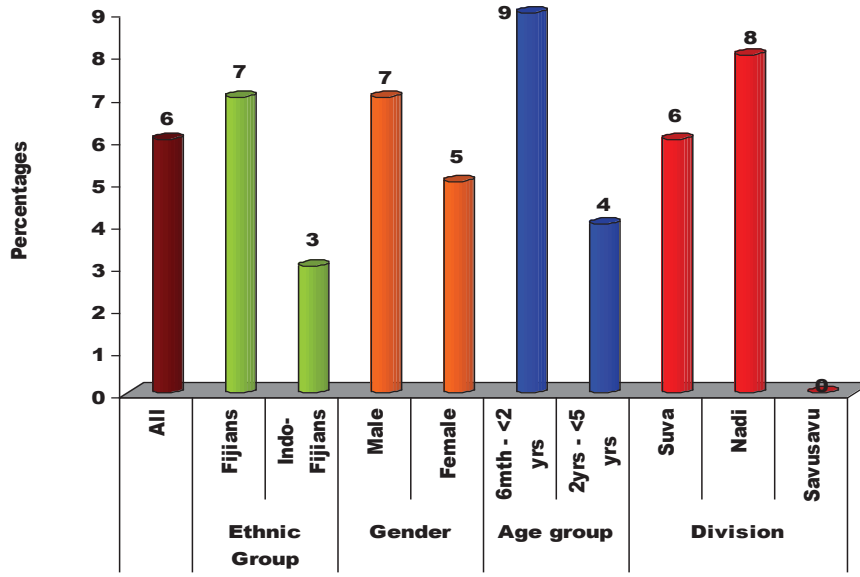


Zinc Status

Although zinc deficiency rates in the under 5 years of age are still less than 10% overall, deficiencies affect their growth, bone development, immune system

functioning and utilization of vitamin A. It is noted in Fig. 9 that zinc deficiency rate is below 10%. More Fijian children (7%), male children (7%), children under 2yrs (9%) and children in Nadi (8%) were zinc deficient.

Figure 9: Percentage of children with zinc deficiency by ethnicity, gender, age group and division



Summary of Situation

To summarize the micronutrient situation in Fiji:

- Iron deficiency anaemia is a major public health problem affecting all populations in Fiji particularly among women and children under 5 years of age;
- Iron deficiency among Indo-Fijian women has consistently been high for decades. These high rates are similar to the overall rate of anaemia reported for women in the Indian continent;
- Iron deficiency anaemia among children under 5 is also high. Nearly two thirds of children under 2 years old surveyed were found anaemic;
- Vitamin A is a public health problem in segments of the population, especially Indian women and children <2years of age;
- Fijian women had higher rates of zinc deficiency compared with Indo-Fijians, making zinc deficiency a problem among Fijian women;
- Some children in certain segments of society, for example, 8% of children under 2 years and 7.8% of children living in Nadi are at greater risk of worsening state of zinc deficiency;
- Multiple micronutrient deficiencies exist. This was relatively higher in Indo-Fijians (15%) than in Fjian women (2.4%). A large proportion of

children 6 months-< 5 years of age (about 40%) were found to have multiple micronutrient deficiency;
- Micronutrient deficiency problems are prevalent in the two groups reported in this chapter: women of child bearing age especially Indo-Fijian women and children < 5years of age.

In many low income families around the world, undernourished children who survive their first 5 years are at greater risk of poor growth along with diminished health and functioning throughout life **(**Papalia et al, 2007).

Possible Contributing Factors to the Current Micronutrient Situation in Fiji

A widely-used indicator for food insecurity is the number of undernourished persons or those deprived of food used (EC-FAO*,* 2008) such as those with micronutrient deficiencies. Contributing factors to the current level of micronutrient problem are many but poor diet and poverty are major reasons (Web & Block, 2004; Zimmermann & Hurrell, 2007).

Further analysis of the Fiji data showed that micronutrient-deficient women:

- consumed less amount of food to meet their daily nutrient needs;
- showed poor choices of food containing micronutrients;
- included less variety of foods rich in micronutrient particularly Indo-Fijian women. Dietary iron bioavailability is low in populations consuming plant-based diets (vegetarian);
- had low intake of fruits and vegetables (micronutrient-rich), that is, typically 1-2 serves compared to the recommended amount of 5 serves per day (WHO, 2004).

Deficiencies in young children under 5 years of age could be attributed to combinations of:

- micronutrient deficits in women before and during pregnancy;
- Low weight at birth (an indicator of poor foetal development generally due to poor nutrition of the mother);
- Shorter period of exclusive breast feeding;
- poor quality complementary foods;
- poor sanitation and hygiene resulting in worm infestation.

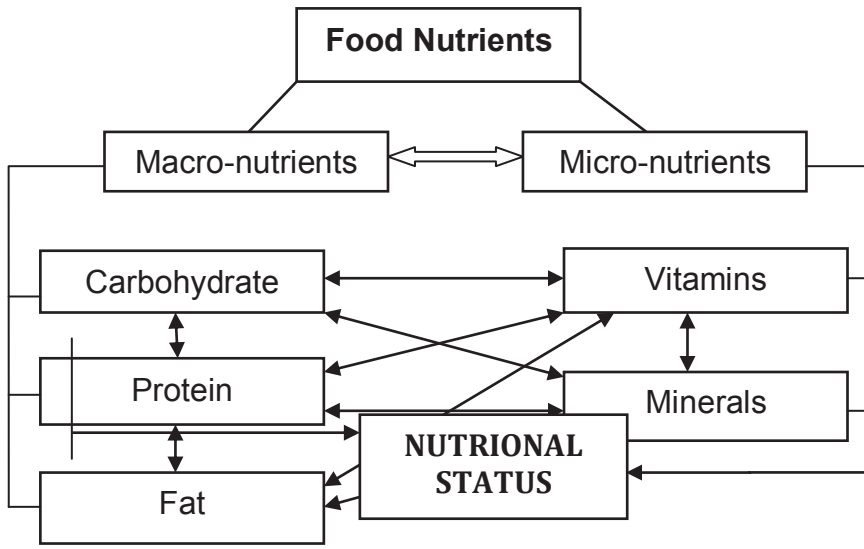
There is strong evidence to suggest that access to food as well as food choices (cultural, religion, convenience and preference) play major roles in influencing micronutrient status (Demment et al, 2003). Globalization of the food system has also contributed to the current situation as well as food insecurity due to poverty is another factor (Schultz, 2004).

Micronutrient Deficiency—A Poverty Perspective

The effect of malnutrition on child development and long term consequences in adult as human capital is well documented (Alderman et al, 2004; Berg, 1973; Black, 2003; Demment et al, 2003; English at al., 1997; Gibney et al, 2003; Johnson & Schoeni, 2007; Null, 1995; Papalia et al, 2007; Tomkins & Watson, 1989; Wootton, 2008). These include:

- poor physical, cognitive and social development in infants and children, which have negative consequences on growth and development potential;
- poor resistance to diseases as a result of impaired immune systems;
- an underlying cause of morbidity and mortality in children and adults alike;
- individuals are not able to attain full social and economic potential therefore not capable of contributing creatively and effectively to their own and nation's economic development;
- low productivity in adults;
- deficiency in one micronutrient has a domino effect on the functions of other micro- and macro- nutrients on food utilization in body (Figure 10).

Figure 10: Interconnectedness of all food nutrients

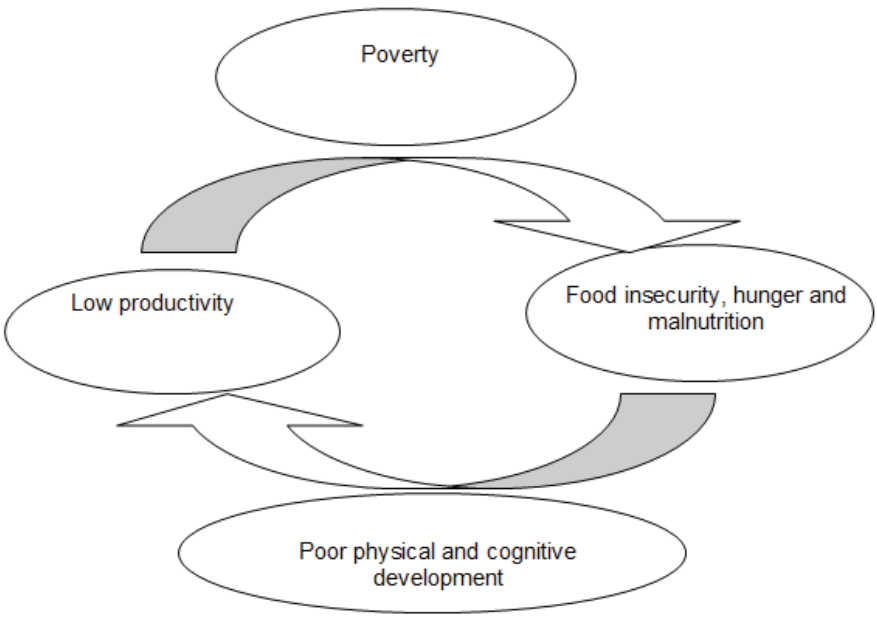


Educators must be aware of these in order to find solutions, prevent and or effectively address the problem of malnutrition (micronutrient deficiency). Micronutrient-deficiency malnutrition is also known as 'hidden hunger' (FAO, 2008), resulting from food insecurity. Within nutrition education research, poverty and food insecurity is now conceptualized as a barrier to healthy eating. The relationship between malnutrition and food insecurity is complex, are deeply interrelated phenomena and can be seen as a vicious cycle (Figure 11). Attempts

to combat them require that the connections between them be explicitly taken into account. It is of interest to note that the first Millennium Development Goal is about reducing poverty as well as maintaining a distinct focus on reducing hunger (EC-FAO, 2008).

Sustainable poverty reduction is an essential precondition for reducing hunger and malnutrition. However, income growth, even if sustainable and equitable, is not sufficient to achieve food security without complementary public interventions (Riely & Mock, 1999). Thus, economic growth alone will not take care of the problem of food security. What is needed is a combination of income growth, supported by direct nutrition interventions (e.g. backyard gardening) and investments in health, water and education (EC-FAO, 008).

Figure 11: Vicious cycle of food insecurity and poverty



Source: EC-FAO, 2008

Informed Nutrition Policy—A National Intervention Strategy

Data from the nutrition surveys presented earlier showed that micronutrient deficiency in Fiji, especially among women and children is extremely high. Because of the important role iron plays in human growth, development and health, the Fiji Government took action and put in place a nutrition policy intervention strategy to address iron deficiency anaemia. The 1993 and 2004 nutrition survey results informed policies to address micronutrient deficiency. An evidence-informed policy, the fortification of locally milled flour with iron and other micronutrients, was legislated and became effective in 2005. Since then, only fortified flour is sold in Fiji. Fortified flour complements the iron tablets mandatorily provided to all pregnant women at ante-natal clinics.

In addition, the National Nutrition Policy in Fiji (NFNC, 2008) contains 4 policy statements that address healthy diets and micronutrient deficiencies:

- Policy Objective 3: To improve national nutritional status;
- Policy Objective 5: To improve nutritional status of the socially, economically disadvantaged and nutritionally vulnerable groups (including women and children);
- Policy Objective 6: Support implementation of Nutrition Policy for schools;
- Policy Objective 7: To promote healthy diets and lifestyles.

The above policy statements have been operationalised in the Fiji Plan of Action for Nutrition (FPAN) (NFNC, 2009), currently being implemented as part of national nutrition intervention to improve the current micronutrient deficiency situation in Fiji. Evaluation of FPAN will be undertaken in 2014, as an integral part of the 4th National Food and Nutrition Survey in Fiji. Detailed information on the processes used to develop Fiji's nutrition policy and FPAN, have been documented and is available from the National Food and Nutrition Centre.

The School Environment

Many studies have shown that eating habits are established in early childhood and the habits are likely to carry through to adulthood. Healthy eating habits developed early in life will encourage healthy eating as an adult (Boyle & Holben, 2006). Therefore targeting children who are more receptive to change is strategically a better way to improve dietary practices. Contento (2007) defined nutrition education as any combination of educational strategies designed to help voluntary adoption of behaviours conducive to healthy eating and well being, through multiple settings involving activities at the individual, community, and policy levels. Reviews examining the effectiveness of nutrition education have shown that nutrition education can make a significant contribution to improved dietary practices (Contento, 2007).

Two important settings that are often not recognized and under-utilized are the home (family) and school environment. The school environment is known to have an important influence on young children and adolescents' nutrition (Wechsler et al, 2000). Therefore, schools are an obvious setting for nutrition intervention. It has been estimated that more than one-third of a child's total energy intake is at school (Bell & Swinburn, 2004). In Fiji, about 54% of students in the intervention schools purchased some food from the school canteen. In addition, only 9.6% of students assessed the foods sold in the school canteen mostly healthy, and 56.9% assessed teachers as good role models for healthy eating (Tuiketei et al, 2010).

Nutrition interventions in schools have also been strengthened by the development of the evidence-informed Fiji Food and Nutrition Policy for Schools (Ministry of Education, 2009), that came into effect in January 2009. Schools can therefore promote healthy eating through implementing the policy. Role modeling by teachers, curricula and regulating the foods sold in canteens for students to buy at school are strategies that could be implemented within the school environment

with the support of the parents. These interventions if implemented must be monitored and evaluated to determine the effectiveness. The challenge is on school management and teachers.

Conclusions

Food insecurity linked to poverty underpins the micronutrient deficiency problem in Fiji. A relatively high proportion of women and children under the age of 5 in Fiji suffer from deficiency of at least one micronutrient. Indo-Fijian women and children in particular have had a long history of high rates of micronutrient deficiencies in the country. Literature has shown that deficiencies with harmful effects are common in women and children in developing countries despite global attempts by WHO and UNICEF to reduce anaemia, iron deficiency, vitamin A deficiency, zinc and other micronutrient deficiencies; these remain one of the most common preventable nutritional problems. Furthermore, micronutrient deficiency is an indicator of food insecurity linked to poverty or hidden hunger. Contributing factors to the situation in Fiji have been attributed to women not eating enough food to meet their needs; less variety in their meals; food eaten may not be good sources of micronutrients and a low intake of fruits and vegetables.

In young children the contributing factors to micronutrient deficiencies were attributed to deficits in pregnant mothers, low birth weight, short period of exclusive breastfeeding, poor quality complementary foods. School intervention is an underutilized setting that must be encouraged to promote healthy eating more effectively. To address nutritional micronutrient problems, a combination of strategies need to be used including nutrition education in schools, job creation, direct nutrition interventions (e.g. backyard gardening) and other public health investments, provision of safe water and sustainable food production that is affordable. Focusing on the younger generation who are receptive to change is the way forward as practices learnt in childhood are more likely to remain when they become adults. The school environment where the teachers are the role models for healthy eating and the home where parents are the informal teachers should be the priority settings for effective nutrition education.

Priority Strategic Response Suggested for Fiji

A number of activities to address poverty and micronutrient malnutrition are already happening in Fiji but these must be strengthened. The problem of micronutrient deficiency in Fiji needs to be approached at national level, at school, community and household levels.

At National Level:

- Implementation and coordination by the National Food and Nutrition Centre (NFNC) of the multi-sectoral Fiji Plan of Action for Nutrition (National Nutrition Strategic Plan 2010-2014) by all sectors, public, private, NGOs with support of regional and international organizations. This had been endorsed by the government;
- Multi-micronutrient supplementation with dietary interventions;

- Monitoring of the Code of Marketing of breast milk substitutes to maintain and protect breastfeeding of infants;
- Implementation and monitoring of the Food and Nutrition Policy for Schools and development of nutrition policy by individual schools;
- Review of curriculum to incorporate relevant healthy lifestyle and agricultural science with a strong food security component;
- Incorporation of land space for household food production in all urban housing development;
- Agricultural policy to include food production for household consumption;
- Proper land use for agriculture;
- Reactivation of Indigenous Affairs policy on food production for household use in Provinces;
- More research conducted to determine how cultures influence dietary patterns and attitudes towards healthy eating.

At community and household level:

- Intensive education on choice and consumption of micronutrient-rich food targeting families (FPAN 2010-2014);
- Promotion of backyard food gardening for home consumption first, and for income generation as second priority;
- Promotion of the Fiji health and food based guidelines in communities to educate people about the importance of adequate nutritious and varied meals.

Key Challenges

Recommendations to improve micronutrient status in Fiji can be effective if taken on board and implemented by the government, Food Industries, Private businesses, Non-Government organizations, and communities. This can only happen when:

- There is political will, commitment and appropriate resourcing;
- Clear key outputs of food security as criteria identified for ongoing assessment – food availability at national level is no guarantee of food and nutrition security at household and individual level;
- The nurturing of close and active partnerships between stakeholders (Government; Food Industries, Private businesses, Non-Government organizations and communities) in a coordinated manner. Educators have a responsibility to promote healthy lifestyles;
- Regional and International Organizations work with local sectors to pull resources together;
- Facilitation of sustained economic growth that includes specific objectives to genuinely improve nutrition and general community welfare;

- Educators take on their role as agents of change and accept the challenge to improve the current situation among young children and women.

References

Alderman, H, Behrman, J & Hoddinott J**.** **(**2004). *Improving Child Nutrition for Sustainable Poverty Reduction in Africa*. New York: International Food Policy Research Institute. www.ifpri.org/2020africaconference

Allen, L. H. (2001). Pregnancy and lactation, in B. A Bowman & R. M. Russel, *Present Knowledge in Nutrition* (pp. 403-425). Washington DC: International Life Sciences Institute.

American Dietetic Association (2002). Nutrition and lifestyle for healthy pregnancy outcome position paper. *Journal of the American Dietetic Association, 19,* 918-927.

Barr, K. (2003). *Wages Council and Just Wages in Fiji*. Suva: Fiji Institute of Applied Studies.

Bell, A. & Swinburn, B. (2004). What are the key food groups to target for preventing obesity and improving nutrition in schools? *European Journal of Clinical Nutrition*, *58*, 258-63.

Benson, T. (2008). Improving Nutrition as a Development Priority. Research Report 156 International Food Policy Research Institute (IFPRI), Washington.

Berg, A. (1973). *The nutrition factor*. Washington D.C: The Brookings Institute.

Black, M. M. (2003). Micronutrient deficiencies and cognitive functioning. *Journal of Nutrition,133*(11), 3927S-3931S

Bowman, B. A. & Russell, R. M. **(**2006). Present knowledge in nutrition. Washington DC: ILSI Press.

Boyle, M. A & Holben, D. H. (2006). *Community nutrition in action*. Belmont, CA: Thomson Wadsworth.

Contento, I. (2007). *Nutrition education: Linking theory, research and practice*. Sudbury, MA: Jones and Bertlett Publishers.

Coyne, T**.** **(**2000). Lifestyle diseases in Pacific Communities. Noumea: Secretariat of the Pacific Community.

Demment, M. W. & Young, M. M. & Sensenig, R. L. **(**2003). Providing micronutrients through food-based solutions: A key to human and national development. *Journal of Nutrition, 133*(2), 3879-3885.

EC-FAO. **(**2008). *Food security concepts and frameworks course information*. Rome: Food and Agricultural Organisation.

Ecker, O. & Breisinger, C. **(**2012). *The food security system: A new conceptual framework*. Washington DC: International Food Policy Research Institute

English, R. & Ngu, T. (1997). Effect of nutrition improvement project on morbidity from infectious diseases in preschool children in Vietnam: comparison with control commune. *British Medical Journal, 315*(7116), 1122-1125

Escobar, A. (1995). *Encountering development: The making and unmaking of the third world*. New Jersey: Princeton University Press.

FAO (1996). *World food summit: Rome declaration and plan of action*. www.fao.org/wfs

FAO (2005). *The state of food insecurity in the world 2005*. Rome: Food and Agricultural Organisation.

FAO and WHO (1992). *Nutrition and development – a global assessment*. International Conference on Nutrition, Rome, Italy.

Gautum, K. C. (2006). Nutrition: A Life Cycle Approach to support the Millennium Development Goals. United Nations Standing Committee on Nutrition News, *32*, 13-15

Gibney, M. J., Elia, M., Ljungqvist, O. & Dowsett, J. (2005). *Clinical nutrition*. Oxford, UK: Blackwell Publishing.

Gibney, M. J., Macdonald, I. A., Roche, H. M. (2003). *Nutrition and metabolism.* Oxford, UK: Blackwell Publishing.

Gibney, M. J., Margetts, B. M., Kearney, J. M. & Arab, L. (2004). *Public health nutrition*. Oxford, UK: Blackwell Publishing.

Gibney, M. J., Vorster, H. H. & Kok, F. J. (2002). *Introduction to human nutrition.* Oxford, UK: Blackwell Publishing.

Gibson, R. S. (2005). *Principles of nutritional assessment*. New York: Oxford University Press.

Godfrey, K.M. & Barker, D. J. (2000). Foetal Nutrition and adult diseases. *American Journal of Clinical Nutrition, 71*,1344-1352.

Hackman, E. (1983). Maternal birth weight and subsequent pregnancy outcome. *Journal of American Medical Association, 250, 2016-19.*

Harvey, R. & Vatucawaqa, P. (2007). *Micronutrient status of women in Fiji, National Nutrition Survey 2004*. Suva, Fiji: National Food and Nutrition Centre.

Johnson, R. C. & Schoeni, R. F. (2007). *The influence of early-life events on human capital, health status, and labour market outcomes over the life course.* University of Michigan: Population Studies Centre.

Kennedy, G., Nantel, G. & Shetty P. (2004). Globalization of food systems in developing countries: a sysnthesis of country case studies. In *Globalization of food systems in developing countries: impact on food security and nutrition*. Rome: Food and Agricuture Organization.

Mann, J. & Trusswell, A. S. (2002). *Essentials of human nutrition*. Oxford, UK: Oxford University Press.

Martorell, R. (1996). *Undernutrition during pregnancy and early childhood and its consequences for behavioural development*. Paper prepared for World Bank's conference on Early childhood development: Investing in the future. http://go.worldbank.org/DL9AKYWQ70

Mason, J., Garcia, M., Mitchell, J., Test, K., Henderson, C. & Tabatabai, H. (1985). Nutrition considerations in project planning. *Food Policy, 10*(2), 109-122.

Meerman, J. (2008). *Making Nutrition a National Priority: Review of policy processes in developing countries and a case-study of Malawi*. Rome: European Community and the Food and Agriculture Organisation..

Ministry of Education, national Heritage, Culture and Sports (2009). National Food and Nutrition Policy for Schools. Suva: Fiji Ministry of Education.

Ministry of Health Women Social Welfare and Poverty Alleviation Annual Report 2008

Ministry of Health (MOH) Annual Report 2008.

Ministry of Health (2002). Fiji Non-Communicable Diseases (NCD) STEPS survey. Suva: Ministry of Health.

National Centre for Health Statistics (2003). *Healthy People 2010 Progress Review: Maternal, Infants, and Child Health*. Hyattsville, MD: Public Health Services.

NFNF (2008). *National food and nutrition policy*. Suva, Fiji: National Food and Nutrition Centre. .

NFNC (2009). *Fiji plan of action for nutrition*. Suva, Fiji: National Food and Nutrition Centre.

Narsey, W. (2008). *The Quantitative Analysis of Poverty in Fiji*. Suva, Fiji: Vanuavou Publishing.

Null, G. (1995). *Nutrition and the mind*. New York: Four Walls Eight Windows.

Papalia, D. E., Olds, S. W. & Feldman, R. D. (2007). *Human development*. Boston: McGraw Hill.

Riely, F. & Mock, N. (1999). *Food security indicators for use in the monitoring and evaluation of food aid programmes*. Food and Nutrition Technical Assistance, USAID.

Schultz, J. T. (2004). Globalization, urbanization and nutrition transition in a developing island country: a case study in Fiji. In *Globalization of food systems in developing countries: impact on food security and nutrition*. Rome: Food and Agriculture Organization.

Schultz, J., Vatucawaqa, P. & Tuivaga, J. (2007). 2004 National Nutrition Survey, Main Report. Suva, Fiji: National Food and Nutrition Centre.

Schultz , J. & Vatucawaqa, P. (2008). Report of 2008 Micronutrient Status of children 6months to <5yrs. Suva, Fiji: National Food and Nutrition Centre.

Schultz, J. T. (1997). Food society and development course books. Suva, Fiji:

University of the South Pacific.

Smolin, L. A. & Grosvenor, M. B. (2008). Nutrition science and application. New York: John Wiley and Sons.

Strauss, J. & Thomas, D. (1998). Health, nutrition, and economic development. *Journal of Economic Literature*, *36*(2), 766-817.

Thomas, B. (2001). *Manual of dietetic practices*. Oxford, UK: Blackwell Publishing.

Thomkins, A. & Watson F. (1989). *Malnutrition and infection. A review*. Geneva: ACC/SCN State of the Art (Series No. 5.).

Tuiketei, T., Snowdon, W., Waqa, G., Kremer, P., Schultz, J. & Vanualailai, N. (2010). *Obesity Prevention in Communities (OPIC) Project – Fiji Report 2004-2008*. Deakin University, Australia and Fiji School of Medice, Fiji.

Uauy, R. & Solomons, N. W. (2006). The role of international community: Forging a common agenda in tackling the double burden of malnutrition. United Nations Standing Committee on Nutrition, *32*, 24-37.

UNICEF (2005). *The State of the world's children*. Oxford, UK: Oxford University Press.

Utter, J., Faeamani, G., Malakellis, M., Vanualailai, N., Kremer, P., Scragg, R. & Swinburn, B. (2008). *Lifestyle and Obesity in the South Pacific*. Auckland, NZ: University of Auckland.

Vatucawaqa P. (2009). *2008 Food balance sheet*. Suva: National Food and Nutrition Centre.

Wechsler, H., Devereauz, A., Davis, M. & Collins, J. (2000). Using the school environment to promote physical activity and healthy eating. *Preventive Medicine, 31*, 121-135.

Webb, P. & Block, S. (2004). Nutrition information and formal schooling as inputs to child nutrition. *Economic Development and Cultural Change, 52*(4), 809-820.

Wootton, D. (2008). Modern miracles; a history of medicine. Transcript of interview on Rear Vision ABC Radio National, 13 July 2008.

WHO (2004). *Global Strategy on Diet, Physical Activity and Health*. Geneva: World Health Organization.

WHO (2005). *Action on the social determinants of health: Learning from previous experiences*. Geneva: WHO Commission on Social Determinants of Health.

WHO (2008). *World health report 2009*. Geneva: World Health Organization.

WHO (2009). Women and health: today's evidence tomorrow's agenda. Geneva: World Health Organization.

Zimmermann, M. B. & Hurrell, R. F. 2007. Nutrition iron deficiency. *Lancelet, 370, 511-520*.

Part II: Higher Education and Its Environment

Chapter 9: The Cultural Challenge to Higher Education in the Pacific—Understanding Pacific Students and Pacific Cultures

Konai H Thaman

Introduction

It seems like yesterday, when I was sitting in a lecture hall at the University of Auckland, a student struggling to survive the many communication problems that I and my fellow Pasifiki students (those with cultural roots in the Pacific Island Countries) were experiencing at university – prompting me to pen the following verse when, many years later, I returned to my Alma Mater:

A weekend in Auckland
Is good
For discovering again
Old meeting places
In the park
Hoping they have stories
To tell
About the adventures
Of a once youthful time

Down under the magnolia trees
The bench that took the weight
Of our first kiss
Is still there
The fountain continues to beat
Like an artificial heart
And the flowers continue to die
With each passing day
And there hovering high above
Is the tower clock?
Now dwarfed by the reality
Of its own time

Its striking shadow a reminder
That the heart's best defense
At this time
Is forgetting

(From Weekend in Auckland,Thaman, 1999a)

In this article I argue that understanding students' cultural backgrounds is as important as the knowledge of what and how to teach for those who teach Pasifiki students – those whose cultural identities are rooted in the small island nations of the Pacific Ocean. I recall the words of one of my tutors at the Auckland Secondary Teachers' College, who once said that there were two messages that he wanted to impress upon us before we left college: know your students and know your subject. I had spent three years at Auckland University learning about my subjects. But sadly I did not learn much about the students that came to my classes: those at Waipu District High School, Tauranga Girls High School, or Papatoetoe High School. Needless to say, I ended up talking to myself most of the time. I knew little about the students' cultural backgrounds and they knew next to nothing about mine, so I stuck to the text book, hoping that the author of the texts would be able to better communicate with the students since they had a common language.

Later when I was a teacher in Tonga trying to teach English literature (not one of my favourite subjects) to a class of Form 5 repeaters, I would make up some verse about life in Tonga in order to illustrate basic elements of poetry, before moving on to discuss the prescribed works of famous English writers and poets. The positive reaction of many students followed by their improved performance in School Certificate English were enough to convince me that my role as a teacher was to make learning more meaningful for students by using content that they could relate to and with which they were familiar. I finally understood what my college tutor meant when he advised, 'know your students'. At teachers' college I had taken a course in educational psychology but I could not relate to what the text book and tutors were saying because the experiences that they and the texts were discussing were foreign to me. In Tonga I realized how important it was to understand the students' home culture and how different these were from the cultures whose values underpinned the knowledge and experiences that they were supposed to learn at school.

My time as a student in New Zealand in the 1960s has had a major influence in my decision to spend a good part of my professional life advocating the importance of cultural democracy in formal education in our home islands and in the Pacific region generally, especially at university. Treating all students 'the same' as if they were a culturally homogenous group, in my view, can and does contribute to student failure and underachievement. However, it is often a big ask to do otherwise because the culture of the Academy as well as most teaching staff, are often quite different from the socializing cultures of Pasifiki students most of whom continue to identify with these (indigenous) Pacific cultures. Staff who have had Pasifiki students in their classes know that it is not an easy task to bridge the cultural gaps that exist between many of their students and themselves, often making communication difficult at the best of times. Yet education officials

in the member countries of the University of the South Pacific (USP) know that many of their students under-perform at USP while in Australia and New Zealand Pasifiki *students as a group*, continue to under-perform as well, despite incidences of high achievement by some individual students. In this article I reflect upon some possible reasons for such a sad state of affairs based mainly on experience as a university student myself in New Zealand and the U.S.A plus nearly 40 years teaching Pasifiki students at high school and universities, as well as my own research and some of my colleagues, at the University of the South Pacific. But first, I wish to define some terms and share some theoretical underpinnings of what I plan to share.

Definitions and Theoretical Underpinnings

I define 'culture' as a way of life of a group of people, which includes their language, and ways of thinking, doing and being. Culture provides most Pacific people with a sense of identity and belonging regardless of where they live, and they continually reaffirm their cultures through behaviour and performance, often linked to various positions and roles that they may occupy, from time to time, in different contexts. For most Pacific people, culture is a dynamic force that is lived rather than debated in university classrooms and/or national parliaments.

Social scientists tell us that culture shapes people's beliefs and attitudes, their roles and expectations, and the way they interpret their own and others' behaviour (Eagley & Chaiken, 1998). Role expectations, they say, are central to human communication including that between teachers and learners (Stryker and Statham, 1985). Role expectations, learned and internalized through the process of socialization, guide people's behaviour and social interactions (Widdowson, 1987), and conflicts usually arise when people use their own cultural cues to guide the way they behave towards others (Giroux, 1992). This is because different participants in the communication process often lack knowledge and understanding of cultural norms and cues, used to interpret the behaviour and conduct of those involved (Riley, 1985). As far as teachers and students are concerned, a role boundary is said to exist and when this is breached, conflicts occur. Cortazzi (1990) suggests that such a role boundary is usually mediated by pedagogy – something that is believed to have a major role in the success or failure of the teaching/learning communication process. However, Barrow (1990) claims that pedagogy itself is shaped by the cultural values and ideologies of the society in which it originates and teachers and lecturers transmit and reinforce these cultural values since they are embedded in their teaching approaches (Kelen, 2002). In cross-cultural context therefore, a teacher's professionalism as well as her cultural competence are important considerations in student performance. The high failure rates of Pasifiki students in schools and universities in our region may be due to conflicts in role expectations and breaches of role boundaries because many teachers and university teaching personnel do not share the cultural norms, values and beliefs of many of their students. It is also interesting to note here a concern expressed by the Joint Committee of UNESCO and ILO on the UN Recommendations on the Status of Teachers and Higher Education Teaching Personnel or CEART about the quality of teaching of university staff and the need for member states to advocate for and support the

provision of pedagogical training for all higher education teaching personnel, especially those who teach first year students (CEART Report, 2006). It also suggested that higher education institutions might work towards setting up teacher-community networks to facilitate support for the ongoing professional development of higher education teaching personnel, and that studies should be commissioned to find out the links between different modalities of professional development and students' performance in different subjects.

Cultural Democracy

Many people know that the Pacific Island region is one of the most culturally diverse on the planet. For many higher educational institutions with Pasifiki students, it means providing for the educational needs of people who belong to a host of cultures most of whom speak English (or French) as their second, third or even fourth language. At the USP for example, over 90 per cent of the (approximately 20,000) students are from Fiji, Samoa, Tonga, Cook Islands, Niue, Tokelau, Kiribati, Tuvalu, Nauru, Marshall Islands, Solomon Islands, and Vanuatu. Understanding Pacific cultures – the source cultures of the majority of these students, is central to teacher-student interaction. Many students come from cultures that have unique systems of perceiving and organising the world around them, influence their behaviour and ways of thinking, and in turn, their academic performance. Yet, the language of communication at the USP is English and the cultures of the curriculum as well as the pedagogy are foreign to most students, making the learning environment of the university 'culturally undemocratic'.

A philosophical precept that recognizes the way a person communicates, relate to others, thinks and learns (Ramirez & Castaneda, 1974), cultural democracy in the Pacific is closely associated with the importation of the dominant ideologies and cultures of Europe (England and France in particular) and more recently, Australia, New Zealand and USA. These foreign cultures, their values and ideas have had a profound and lasting impact upon Pacific peoples, cultures, and education. More recently, however, cultural democracy has been associated with the right and opportunity of Pasifiki students to study and use their own cultures, languages and knowledge systems, in schools and universities, opportunities that many have been denied.

However, in a world where education is increasingly being called upon to provide the bases for modern economic development as well as an introduction to and success in the global cash economy, teaching and learning of worthwhile knowledge, skills and values associated with Pacific cultures and their knowledge systems continue to be regarded by many, including Pacific Island people themselves as having little contribution to make towards the achievement of the over-riding economic goals of many national governments as well as educational institutions themselves. Perhaps it is the neglect of and failure to acknowledge students' cultural knowledge by formal education institutions that is contributing to their under-achievement as well as to many Pacific cultures' apparent inability to renew themselves, resulting in the migration of many people from rural to urban areas and ultimately to metropolitan countries, such as Australia and New Zealand, where they increasingly many feel isolated, fulfilling only menial functions or in some cases, no function at all. While this is happening, the

curriculum of many Pacific schools and universities continue to make wrong assumptions about teachers and learners, despite the fact that many educators now agree that the socio-cultural system of a student's home and community is influential in producing culturally unique and preferred modes of relating and communicating to others, thinking, learning, remembering and problem solving (Leach & Little, 1999).

The call for cultural democracy to be the foundation for teaching and learning in Pacific schools and higher education institutions has largely been ignored (Taufe'ulungaki, 2003; Thaman, 2011). It is, after all, extremely difficult, especially in higher education because of the way university curricula continues to be influenced by global culture and the experiences and ideologies of Euro-American cultures. The best that the Academy can do, therefore, is to acknowledge, value and emphasise the cultural backgrounds of our students in its core business, especially in teaching and research. At the institutional level, a culturally democratic learning environment would mean policies that take into consideration Pacific cultures especially those of indigenous peoples since they make up majority populations in most Pacific Island Nations. It is possible to view cultural democracy from three vantage points: language, values and teaching/learning styles, areas where there exist marked differences between what many students may learn formally and what they know to be true as a result of their informal learning and socialisation in their own cultures (Thaman, 1988; Nabobo, 2003).

Language and Inquiry

Unlike Western, scientific traditions of inquiry, the Tongan tradition of inquiry, for example, is less abstract and analytical and more practical and substantive. It does not place great emphases on logical thinking as described by Western philosophers although this does not mean that Tongans are not able to think and analyse; rather it means that learning and knowledge are closely tied to the realities of everyday life, and experiences and ideas are expressed through people's experiences over time, thus suggesting a strong utilitarian emphasis (Helu, 1999). On the other hand most university teaching personnel are often preoccupied with clarity of expression of thought, often de-emphasising subjective, emotion-filled expressions of language, the very things that characterize many Tongan students' cultural expressions and language. Other Pacific languages also do not clearly distinguish between objective and subjective statements nor have they the equivalent structures to describe these; yet they are ideal for communicating beliefs, sentiments and attitudes and in the context of culture, they are highly functional and practical (Bakalevu, 2003). Most Pacific students' thinking and learning are integrated into a cultural system where human relationships as well as human activities are extremely important (Thaman, 1988:89-125). The implications of these for many students' use of English (or another language) to communicate their ideas cannot be over-emphasised.

Cultural Values

Cultural values, because of their nature, form and expressions, also present some difficulties for many students, a problem that is further complicated by the early indifference, for example, of the USP to the teaching of Pacific cultures and languages that would have exposed many students to the sociological, psychological, anthropological or artistic characteristics of different cultural groups that constitute Pacific island populations. The reason that was commonly advanced had to do with a perceived difficulty of choosing which cultures and/or languages to include in the university curriculum. The real reason may have something to do with the Euro-centric perspectives of USP's founding fathers (most were males!) as well as university staff themselves. What is also disappointing has been the tendency of some Pacific staff and students themselves to view their own cultures and values as unimportant for their advancement as academics and/or researchers. Today, a generic course in Pacific Studies is expected to go some way towards addressing the issue of recognizing and valuing students' home cultures, but cynics say that this is tokenism since the other 23 courses would be business as usual.

Teaching and Learning Styles

In relation to teaching and learning styles it is useful to recall the work of Bernstein (1961), Hess and Shipman (1965) and Harris (1980) who claim that ethnicity and differences in cultural values are as important as socio-economic class, if not more so, in determining the characteristics of a student's learning style. Since learning styles are primarily the result of a unique, culturally influenced teaching style, there is a need to examine the teaching styles that are characteristic of different cultural groups in the Pacific. The student-centred approach to teaching has been advocated as the best approach to teaching by many teacher educators and I would agree. However, my experience in working with many Pasifiki learners suggest that it is not so much getting students to work on their own (teacher as facilitator) as assisting them and genuinely showing personal interest in their learning progress. Those who study through distance education, for example, know that many prefer face-to-face interactions with their tutors even though most of the information they need are contained in the learning packages. During many discussions with distant undergraduate students most indicated their preference for lecturers who empathized with their language problems and who use examples to which they could relate and understand instead of those that were in the text books or drawn from the lecturers' own (foreign) culture or place of origin (Thaman, 1999b). Even at the postgraduate level most students prefer face to face interactions with their lecturers or a combination of face-to-face and online modes rather than a totally online approach (Raturi, 2011).

A milestone in terms of professional development of teaching personnel at the USP was the introduction of the Graduate Certificate in Tertiary Teaching in 1997, one of the first universities in the world to offer such a program. This program was later upgraded to a Diploma, when new courses on distance and flexible learning and research were introduced. All courses are offered online and/or through summer/flexi modes. While this initiative was a welcome addition

to USP's commitment to improve its own staff's teaching competencies, the fact remains that not everyone is taking the opportunity to learn more about flexible teaching or about students, often insisting that they already knew how to teach or that they treat all students equally. Others continue to see themselves as helping to re-educate students, perpetuating a cultural deficit model of teaching which reinforces the idea that there is something wrong with a student's home culture and that everyone needs to conform to the cultural expectations of the university, which in practice often conforming to the teacher's own cultural expectations.

The perceived need for university staff to treat all students equally is of course based on the assumption that students are a homogenous cultural group. Such an assumption prevents educational institutions from formulating a coherent teaching/learning policy that realises the goals of cultural democracy. This form of cultural blindness is usually the result of a refusal to acknowledge that students come from a diversity of cultural backgrounds and that they experience different socialisation practices which affect their behaviour, including how they learn. It is not uncommon, for example, to hear lecturers lament students' communication problems, lack of initiative, and passivity during class discussions, or reluctance to confront their teachers. Few if any, see the irony in the fact that many students' first language, the basis for both cultural transmission as well as learning, has been severely compromised in the process of their school education and their own societies' push to modernize. This is reflected in how some of the USP member countries allocate higher education scholarships, with far more being granted in disciplines such as Accounting, Economics, Management and Computing and fewer, if any in areas such as Sociology, History, Geography, Pacific languages, or Art - subjects that are central to understanding Pacific societies and cultures, people and their environments. While the needs of modernizing Pacific nations for economists, accountants and information technologists and the like is acknowledged, it is fair to say that all Pacific Island nations need graduates who are not only intelligent and creative but also understand the cultural contexts in which they plan to work after they graduate.

There have been some positive signs in relation to addressing the teacher-student communication challenges in higher education in the Pacific. Important policy changes at USP relating to research and teaching have been mentioned. In other areas, the School of Education in association with the Institute of Education has been encouraging the documentation and publications of studies in the general area of culture and education. In 2003, 'Educational Ideas from Oceania' was published by the USP's Institute of Education in association with the UNESCO Chair in teacher education and culture. A second edition of this publication came out in 2009. The authors are Pacific staff and students who taught or enrolled in an undergraduate course, 'Educational Theories and Ideas' which deals with indigenous educational ideas as well as those originating from the West. This publication was a milestone in an attempt to encourage staff and students to critically analyse, theorise and reclaim their education as well as learn about other Pacific people's educational ideas and values.

Before the publication of 'Educational Ideas' a series of Teacher Education Modules on selected aspects of the teacher education curriculum were published in 2000, targeting teacher educators as well as teacher trainees. Some of the titles include: Towards culturally democratic teacher education (Thaman, K);

Vernacular languages and classroom interaction in the Pacific (Taufe'ulungaki); Incorporating local knowledge in teaching about society (Nabobo); Making sense of human development: beyond western concepts and universal assumptions (Tupuola); Ways of mathematising in Fijian society (Bakalevu); and, Learning from indigenous leadership (Sanga). Feedback from some teachers training college lecturers indicate that they as well as their students have found the Modules useful. New titles are being prepared.

As well as materials production, postgraduate students at the School of Education are encouraged to use and/or adapt Pacific research frameworks and methodologies in their research studies and possibly develop their own personal philosophies of teaching and learning. Pacific frameworks including *Kakala* (Thaman, 1993) *Kurakaupapa Maori (*Smith, 1999*), Fa'afaletui (*Tamasese, et al 1997), Malie and Mafana (Manu'atu, 2000), and more recently, *Vanua* (Nabobo-Baba, 2006) *Manulua* (Vaioleti, 2010) and Iluvatu (Naisilisili, 2011) often inspire Pasifiki students to look towards their own cultures and knowledge systems for knowledge, skills and values that they might use to further their formal education (www.educationcounts.govt.nz).

Such valuing of Pacific cultural resources was exemplified in a regional Sustainable Livelihood and Education Project (SLEP) of the USP's Institute of Education in 2005. An initiative of the Rethinking Pacific Education Initiative (RPEI) and funded by the New Zealand's International Aid and Development Agency (NZAID), the study used as its framework an adapted version of *Kakala* as well as Tongan research methodologies of *nofo* and *talanoa*. The RPEI is serious about the role of culture especially cultural values, in research and educational development and it encourages researchers and educators to interrogate what is being imported to the region in the name of education, and to re-think this in the contexts of Pacific cultures and their realities. Since 2001, RPEI has sponsored national as well as regional conferences in the Pacific on a variety of topics ranging from educational aid, to curriculum development, research and leadership. RPEI is a network of Pacific educators who are united in their commitment to improving the quality of education in the region. A symposium held in 2011 to mark the tenth anniversary of RPEI focused on two main themes: research and leadership. More information on this may be obtained from the www.nope.org or *Vaka Pasifiki* FB.

The issue of ethics in research has also been a concern of many of us who are working in higher education institution in the Pacific region. Because ethics has to do with appropriate behaviour it follows that its interpretation in one society may not necessarily be the same in another, especially in a region that is as culturally diverse as the Pacific Islands. Wax (1991) had suggested that while both researchers and the researched have standards for assessing conduct in most cases, these standards are incommensurable for the parties, if they do not share a common moral vocabulary or a common vision of the nature of human beings as actors in the universe. As suggested by Smith (1999), much of the thought behind the idea of respect for human dignity, for example, could have served to create and perpetuate unethical conduct, attitudes and behaviour in the practice of research by some Europeans on aboriginal people in the past (and perhaps even now). The desire for an ethical framework in indigenous research is an attempt to restore order and balance to people's daily lives which comes with the assertion

of traditional values and ethics (Castellano 2004; Maka, et.al, 2006). In analyzing ethical issues in Pacific research therefore one needs to look at themes such as: interpretation of ethics; depiction of Pacific people in research; scientific methods; academic freedom; Pacific experts; appropriation of knowledge; collective ownership and consent; benefits and distributive justice; and of course confidentiality. This last issue is tricky when it comes to considerations of individual verses collective rights especially in some societies where the views of the group may take precedent over the view of the individual.

An important challenge in relation to research in higher education in Pacific Island nations has to do with ownership, control, access and possession of knowledge – issues that are closely linked to the agenda of Pacific people's self-determination. They serve as guides to the re-appropriation of research activities and outcomes in Pacific research within the context of the agenda to develop a Pacific indigenous worldview-based research paradigm. RPEI is encouraging the development of Pacific research frameworks for the Pacific Indigenous Research Agenda which also serves to enhance capacity building of indigenous researchers by bringing concepts of ownership and control to the attention of Pacific communities. At USP, SLEP was part of an attempt to develop community-based research guidelines and agreements, paying attention to how community-based research information is accessed and how research is conducted. We wanted the various communities that the university serves to have some control over research activities in their areas. Such empowerment would engender a sense of interest and responsibility at the community level as people become more involved in the processes of research and activities that support the institutions where their young people study. A good example of such empowerment may be seen among the Maori in Aotearoa New Zealand where Maori community research guidelines have become valuable tools for asserting indigenous people's jurisdiction over community (cultural) resources. Community guidelines are different from university guidelines, which often do not recognize indigenous rights and jurisdictions. I am personally concerned about the effectiveness of institutional guidelines to adequately address local and indigenous issues in our part of the Pacific.

In this chapter, I have reflected on the importance of inter-cultural understanding to the teacher-student communication process in higher education, including research. I know many Pasifiki students who have excelled at the university level, often in spite of their teachers' lack of understanding of their cultural backgrounds. I am not really concerned about them. I am, however, concerned about those who have dropped out after their first year of higher education; or who are struggling perhaps because they have difficulty understanding their lecturers and what they are supposed to learn and do. The students' learning needs and difficulties may be linked to their different cultural backgrounds - which those of us who teach at the university level need to make an effort to understand in order that we may better communicate with them and help them improve their performance. The onus is on us and our institutions to do better.

References

Barrow, R. (1990). Culture, values and the language used in classroom. In Harrison (ed) *Culture and language classroom*, Hong Kong, British Council, p. 3-10.

Bakalevu, S. (2003). Ways of mathematising in Fijian society. In Thaman, K.H. (Ed.). *Educational Ideas from Oceania* (pp. 61- 72). Suva, Fiji: Institute of Education, University of the South Pacific.

Bernstein, B. (1995). Pedagogy, symbolic control and identity: theory, research and critique. Bristol: Taylor & Francis.

Castellano, M. (2004). Ethics of aboriginal research. *Journal of Aboriginal Health, 1*(1), 98-114.

CEART (2006). Report of the Joint Committee of ILO and UNESCO on the Recommendation Concerning the Status of Teachers and Higher Education Personnel, Paris.

Cortazzi, M. (1990). Cultural and educational expectations in the classroom. In Harrison, B. (ed) *Culture and the language classroom* (pp. 54–65). Hong Kong: British Council.

Eagly, A.H. & Chaiken, S. (1998). Attitude structure and function. In Gilbert, D., Fiske, S.T. and Lindzey G. (eds), *Handbook of Social Psychology* (4th ed.) (pp. 269-322).4th edition, New York: McGraw Hill.

Giroux, H. (1992). *Border Crossing: cultural workers and the politics of education*. New York: Routledge.

Harris, S. (1980). *Culture and learning: tradition and education in Northeast Arnhem Land.* Darwin: Department of Education.

Helu, I.F (1983). *Thinking in Tongan society*. Tonga: Atenisi Press.

Johansson-Fua, S. (2006). *A Report of the Sustainable and Education Project (SLEP), Tonga pilot study*. Suva: Institute of Education, University of the South Pacific.

Kelen, C. (2002). Language and learning orthodoxy in English classrooms in China. *Educational Philosophy and Theory, 34*(2), 223-237.

Leach, F.E. & Little, A.W. (eds). (1999). *Education, Cultures and Economics*. London: Falmer Press.

Maka, L., Johansson-Fua, S. & Pene, F. (2006). *Emerging themes & methodologies from educational research in Tonga.* Suva: Institute of Education, University of the South Pacific.

Manu'atu, L. (2000). *Tuli ke ma'u hono ngaahi malie: pedagogical possibilities for Tongan students in New Zealand secondary schools*. Doctor of Education thesis, Auckland: University of Auckland, New Zealand.

Maua-Hodges, T. (2002). *Tivaevae.* Personal communication.

Nabobo, U. & Teasdale, J. (1995). Education for cultural identity. *Prospects 25*(4): 695-706

Nabobo, U. (2000). *Incorporating local knowledge in teaching about education and society: a Fiji case study.* Module three, Pacific Cultures in the Teacher Education Curriculum Series. Suva: Institute of Education/UNESCO Chair, University of the South Pacific.

Nabobo, U. (2003). Indigenous Fijian educational ideas. In Thaman, K. (ed), *Educational Ideas from Oceania* (pp. 85-93). Suva: Institute of Education/UNESCO Chair, University of the South Pacific.

Nabobo-Baba, U. (2006). *Knowing and learning: an indigenous Fijian approach*. Suva: Institute of Pacific Studies, University of the South Pacific.

Naisilisili, S. (2011). '*Iluvatu: an exploratory study of Cu'u Indigenous Knowledge and implications for Fijian education*. Unpublished PhD thesis, Suva: University of the South Pacific.

Pene, F., Taufeulungaki, A. & Benson, C. (2002) *Tree of opportunity*. Suva: Institute of Education, University of the South Pacific.

Ramirez, M. & Castaneda, A. (1974). *Cultural democracy, biocognitive development and education.* New York: Academic press.

Raturi, S., Hogan,R., & Thaman, K.H. (2011). Learning preferences for instructional delivery mode: a case study of the University of the South Pacific. *International Journal of Instructional Technology and Distant Learning*, *8*(6), 17-32.

Riley, P. 1985 *Discourse and learning*, London: Longman.

Sanga, K. (2000). *Learning from Indigenous Leadership*. Module Six, Pacific Cultures in the Teacher Education Curriculum Series, Suva: Institute of Education/UNESCO Chair, University of the South Pacific.

Smith, L. (1999b). *Decolonising methodologies.: research and indigenous peoples*. London: Zed Books.

Stryker, S. & Statham, A. (1985). Symbolic interacting and role theory. In Lindzy, G. & Aronson, E. (eds). *Handbook of Social Psychology, Vol.1, 3rd Edn*, (p. 311-378). New York: Random House.

Tamasese, K., Peteru, C. & Waldegrave, C. (1997). *Ole tae ao afua – the new morning. Samoan perspectives on mental health and culturally appropriate services*. Auckland: Health Research Council, New Zealand.

Taufe'ulungaki, A.M. (2000). *Vernacular languages and classroom interaction in the Pacific*. Module two, Pacific Cultures in the Teacher Education Curriculum Series. Suva: Institute of Education/UNESCO Chair, University of the South Pacific.

Taufe'ulungaki, A.M. (2003). Pacific education; are there alternatives? In Pene, F., Taufe'ulungaki, A.M. and Benson, C., *Tree of Opportunity* (pp. 5-21). Suva, Institute of Education, University of the South Pacific.

Thaman, K.H. (1988). *Ako* and *faiako*: cultural values, educational ideas and teachers role perceptions in Tonga. Unpublished PhD thesis, the University of the South Pacific, Suva.

Thaman, K.H. (1993). Looking towards the source. *Access 2*(2), 44-50

Thaman, K.H. (1999a). Students' cultural orientation. In Landbeck, R. and Mugler, F. *Hints for teachers* (pp. 19-22). Suva, University of the South Pacific.

Thaman, K.H. (1999b). Different Eyes: schooling and indigenous education in Tonga. In Leach, F.E. & Little, A.W. (Eds). *Education, Cultures and Economics* (pp. 69-77). London: Falmer Press.

Thaman, K.H. (1999c). *Songs of Love*. Suva: MANA Publications.

Thaman, K.H. (2000). Towards a new pedagogy: Pacific cultures in higher education. In Teasdale, R. and Rhea, M. (eds) *Local knowledge and wisdom in higher education* (pp. 43-50), New York: Pergamon Press.

Thaman, K.H. (Ed). (2003). *Educational Ideas from Oceania*. Suva, Fiji: Institute of Education, University of the South Pacific.

Thaman, K.K. (2005). Indigenous education and indigenous knowledge systems: a personal reflection. *International Indigenous Journal 1*(1):23-24.

Thaman, K.H. (2011, December). *Of waves, winds and other important things: a way ahead for the Re-thinking Pacific Education Initiative for and by Pacific Peoples*. Re-thinking Pacific Education Initiative for and by Pacific Peoples 10th Anniversary Symposium, University of the South Pacific, Suva.

Tupuola, A.M. (2000). *Making sense of human development: beyond western concepts and universal assumptions.* Module Four, Culture in the teacher education curriculum series. Suva: Institute of Education/UNESCO Chair, University of the South Pacific.

Vaioleti, T. (2010). *Talanoa, Manulua and Founga Ako*. Unpublished PhD thesis, Hamilton: University of Waikato, New Zealand.

Widdowson, H.G. (1987). *The roles of teacher and learner*. ELT Journal *41*(2), 83-88 www.educationcounts.govt.nz

Chapter 10: Teaching and Assessing for Understanding at a University in the South Pacific

Gillian Boulton-Lewis

Pacific people have their own unique ways of knowing that shapes how they learn, and this should be taken into account when planning curriculum and teaching. Pacific people are more likely to want to learn by doing, seeing, and collaborating in a concrete environment. Whereas for Western students, learning becomes quickly formal and depends more on words and theories. This assumed difference in learning preferences could present a problem for formal learning with the need to bridge the gap psychologically and epistemologically between concrete and formal modes of learning. It could be the reason why some students in the Pacific, even at the tertiary level, rely heavily on rote learning. This chapter is a discussion of learning and assessment practices that help to foster understanding as they might apply to teaching at a university in the South Pacific.

Epistemology of Knowledge and Knowing in Western Research

Brownlee, Berthelsen and Boulton-Lewis (2010) summarized literature showing that over the last 30 years, a strong research culture has developed in the area of personal epistemology. Personal epistemological beliefs are those held by individuals about the nature of knowing and knowledge (Hofer & Pintrich, 1997). According to Kuhn and Weinstock (2002), individuals first hold absolutist beliefs about knowing, meaning that knowledge is viewed as "right or wrong", does not change and does not need to be examined because the "right" information is transmitted from a source to the individual. Next individuals develop multiplist epistemological beliefs and consider knowledge to be based on personal opinions because they view it simply as absolute and transferable. From this perspective they believe knowledge can be constructed but that it is not necessary to base it on evidence. Knowledge for a person with multiplist beliefs is personal, intuitive and unexamined. Finally, individuals with evaluativistic beliefs about knowledge also acknowledge that it is personally constructed however an evaluativist weighs

up evidence to construct their understanding. For a person with an evalualtivist perspective knowledge is evolving, tentative and evidenced-based. Brownlee et al (2010) also stated that from a developmental tradition, researchers have shown that individuals change in their beliefs over time, often as a result of educational experiences.

Research from an epistemological perspective has demonstrated that core beliefs about knowing and knowledge influence learning and that these core beliefs are very hard to change. Brownlee (2001) found that student teachers with evaluativistic beliefs were more likely to use deep approaches to learning that were focused on meaning-making. Conversely, Hammer (2003) found that students with objectivist epistemological beliefs conceived of physics as separate pieces of information with no links to everyday experiences. For them learning was a process of memorizing and repeating information without making any links to previous knowledge.

Conceptions of Learning and Deep and Surface Approaches

Boulton- Lewis (2004) reviewed research in conceptions of learning and teaching. Most of this was phenomenological and conducted in Western settings however there was one study in Fiji and one in Nepal. Despite differences in emphasis and numbers of categories of conceptions of learning in different contexts there is overlap and remarkable consistency with the original conceptions proposed by Marton et al. (1993). They all range from quantitative conceptions usually associated with surface learning and strategies, to qualitative conceptions which are associated with deep strategies and an intention to understand. Quantitative conceptions include beliefs that learning is just increasing knowledge by getting facts, memorising and reproducing these, and applying the information [without understanding it]. Qualitative conceptions include beliefs that learning is about understanding, seeing something in a different way after learning, and perhaps even changing as a person. Marton et al. (1997) suggested that the structure of the experience of learning in formal settings may be more or less universal. However, this may simply reflect the culture and practice of such institutions. Entwistle (1997) believes that as students progress through a course at university their conceptions will generally move from one of acquiring `discrete packages of information' to one that constitutes change in themselves and the world around them. This seems to be borne out by most of the studies described above.

A few studies of conceptions of learning were undertaken with university students from other cultural backgrounds. For example with distance learners at the University of the South Pacific, Mugler and Landbeck (2000) found what could be interpreted as `levels of understanding'. Most students explained understanding as `knowing the content' or `knowing how to do something' while some stated that understanding was `knowing the meaning of subject matter'. This is similar to the three kinds of understanding described by Boulton- Lewis et al. (2001). Dahlin and Regmi (1995) interviewed both Nepali university students and secondary school students. They found conceptions similar to the original six described by Marton et al. (1993) but with different levels of memorising, more emphasis on meaning, more linkage between understanding, memorising and conceptions of the results of learning as `a change of behaviour, a change of

consciousness or understanding, or change in both'. These last `change' conceptions are a little like the 4th and 5th conceptions found for Aboriginal students (Boulton-Lewis, 2001). Dahlin and Regmi proposed that culture does not determine the content of the learning experience in an absolute sense but that it does influence those aspects of the experience that are accentuated. Meyer and Boulton-Lewis (1999) operationalised conceptions of learning and other associated aspects in an inventory (RoLI) which was used with Australian, Indonesian and South African students. The results indicated that conceptions of learning are associated with cultural and experiential factors.

From a different perspective Tynjala (1997) investigated the conceptions of the dimension of the learning *process* held by educational psychology students in a Finnish university. The set of seven conceptions that she proposed are interesting in that they are more concerned with how the student learns and what the student does to learn than what the student believes learning to be. These conceptions range from considering learning as an externally determined process to a creative process, and they are semi-hierarchical and not necessarily mutually exclusive at the individual level.

Learning, Knowledge and Ways of Knowing in the Pacific

Thaman (1995) discussed Tongan concepts of learning and knowledge and their relevance to education. She asserted that important aspects of Oceanic culture have persisted despite imposition of foreign European values and ideologies in formal education. She analyzed the development of the meaning of three Tongan words *ako, ilo* and *poto* (meaning roughly teach/learn, the result of learning, and to be intelligent/knowledgeable/wise respectively). *Ako* occurred mainly through observing, listening and imitating; *Ilo* through searching, learning and studying; and *poto* through *ako* and *ilo*. She described traditional Tongan education as informal, provided within the household and wider community, through myths, legends, dance, poetry, proverbs, and rituals as opposed to book and school learning. The emphasis is on the 'here and now' as opposed to 'there and then' and the abstract; and learning is group-oriented rather than individual- oriented. She asserted that the Pacific view of the world is one where people are an integral part of the environment as opposed to being masters of it. This presents a conflict between the values of the formal work in schools and the students' culture which has led to an emphasis on passing exams no matter what is being learned. Modern education in Tonga is mainly valued for utilitarian reasons viz. to help people find jobs to fulfill their social obligations. She argued that we need to analyze indigenous structures, processes, and emphases that underlie learning in traditional societies to bring about synthesis of the best of Pacific and Western cultures for the sake of learners. She reiterated some of these issues (Thaman, 2001) described initiatives that had occurred since 1995, and argued that whilst the contrast between modern schooling and Oceanic cultures is great it is not an unbridgeable gap. She proposed that the main bridge must be in the preparation of teachers.

Nabobo (2001) described similar views of knowledge and ways of knowing in Fiji to those identified by Thaman in Tonga. She stated that the Fijian lifestyle places a lot of importance on social gatherings, sports, cultural functions, church

activities and ceremonies. Hence there is often a lack of commitment by Fijian parents to education as compared with *vanua* (community). In addition, Fijian society promotes communal living and work as opposed to individual aspirations for advancement. There is also a lack of desire for competition among most indigenous Pacific people because it can lead to ruining relationships or disturbing peaceful co-existence. Life on earth *(vuravura)* is closely tied to spiritualism and the supernatural: nature, the heavens, God and so on, whereas the world of school, on the other hand is about empiricism and involves generalizing, hypothesizing, unrelated to a practical task; evaluating objectively other people's or culture's beliefs and summarising, enquiring, justifying, clarifying, interpreting and challenging. In most indigenous Pacific societies, children are not encouraged to talk a lot. In Fiji verbalising is not seen as a positive attribute in growing children and generally, learning occurs by observation, imitation and participation, and verbal interactions primarily for the purpose of learning are rare. Hence in Fijian schools children, who are quiet, listen passively, follow instructions and advice and ask few or no questions are favoured.

Otsuka (2004) conducted research in Fiji on cultural influences and academic achievement. Whilst his research is sociological and from an outsider's perspective he made some interesting points about the cultural differences in values, beliefs and practices that affect achievement amongst Indo- Fijians and ethnic Fijians in the Fiji context. He views the gap from outside in that he is looking at the comparative success of the two groups in formal education. He states that in Indo – Fijian culture education is respected and valued highly and parents believe that helping students to strive for academic excellence is important. That this striving might result in rote learning to achieve high grades is not really discussed. On the other hand, he observed that ethnic Fijian parents encouraged children to become good members of the community. For that reason a large amount of time and money is spent on contributions to ceremonies and church, sometimes at the expense of children's education. He also cites Dakuidreketi (1995) who found a mismatch between students' cultural norms in Fiji and those required for success at the University of the South Pacific.

Implications for Teaching

On the basis of the literature summarized above, it is likely that students are entering formal university courses with beliefs about learning that are not always conducive to the best outcomes. A large number of them may have learned to learn by rote in secondary schools for a variety of reasons. This may have occurred because their Pacific ways of learning, more suited to informal concrete situations, have not really been adapted to formal learning in school. Hence at some stage when learning became difficult they may have resorted to rote learning, without much understanding to achieve success and to gain entry to tertiary education. The same situation may have occurred for Indian students who, strongly motivated to achieve, also resorted to rote learning. Thus we are likely to have a large number of students entering university in the Pacific who hold lower level quantitative beliefs about learning. Put simply, they may believe that learning is just taking in information and remembering it to give it back in assessment situations. These kinds of students are found all over the world

however, there may be more of them in the Pacific because of their cultural background and school experiences. If such students are to learn effectively at university their beliefs and conceptions need to change, both for their own ongoing learning, and for their future approaches to their careers. They need to learn that 'real' learning means understanding subject matter well enough to at least apply it. Core beliefs are very hard to change as discussed above. This means that we need to teach at university so that we make students engage in deep learning and experience the difference in terms of outcomes.

Deep and Surface Learning

Deep learning, as described by Biggs and Tang (2007) has the following characteristics. A student engaging in deep learning has: the intention to understand; focuses on the underlying meaning, themes, main ideas, principles, and applications in the material to be learned; considers related details; has positive feelings and interest in what is to be learned; sees learning as important and a challenge; and is looking for answers to their own questions. This is related to a qualitative conception of learning.

On the other hand a student who engages in surface learning: has the intention to get the task out of the way with the minimum of effort; undertakes low level cognitive activities; rote learns selected content; pads essays; lists points instead of discussing and relating them to practical use; quotes secondary references; and generally memorises material usually without understanding it.

Teaching for Deep Learning

One way of organising teaching so that students are forced to engage in deep learning is the use of constructive alignment as the basis for planning. Constructive alignment is a model proposed by Biggs and Tang (2007) to encourage students to undertake deep learning. It assumes that students should be helped to *construct* their own knowledge structure, hence the term constructive. It is a proposal that aims/objectives/intended learning outcomes, teaching/learning strategies, and assessment and grading, should all be aligned and that if deep learning is to occur, then the three components above should all be directed towards it. The idea is that the teaching learning environment is planned so that the students are in a situation where they are prompted to make meaning of content and integrate this with their existing knowledge. In this situation, they are not presented with 'facts' as such, except perhaps in a overview, and are encouraged to find knowledge, read, think and discuss to reach their own conclusions. Understanding of basic necessary concepts is more important in this model than an attempt to cover every possible idea.

Biggs (2003) proposed four levels of understanding based on his SOLO (Structure of Observed Learning Outcomes) Taxonomy, with some verbs to describe the kind of learning at each level. These are as follows:

- Minimal understanding, basic facts: Memorize, identify, recognize;
- Descriptive understanding: Classify, describe, list;

- Integrative understanding and relating facts to each other: Apply (to known contexts), integrate, analyse, explain origins/causes;
- Extended understanding: Being able to go beyond what has been taught, deal creatively with new situations, apply to novel contexts, hypothesize, reflect, generate.

These verbs are a good guide to determining the level of intended learning outcomes and assessing them. For example, if you only expect students to recognize terms and facts in multiple choice assessments, you are assessing for minimal understanding and no matter how good your teaching is some students will tailor their learning to meet these standards. On the other hand, if the assessment requires extended understanding such as applying ideas creatively to their workplace contexts, students will be forced to achieve a higher level of learning.

Assessing for Learning Understanding

It has been said that assessment shapes learning. If students are aware of the intended outcomes for their learning and how these will be assessed it should affect how they go about the task. They are considered briefly for the kind of learning that they cause students to engage in. Some examples of assessment tasks are as follows:

Multiple Choice and Short Answer Tests

Both multiple choice and short answer tests can be carefully designed to measure deep learning, understanding and problem solving (see Boulton-Lewis, 1998, p. 211 for an example). However, they usually assess reproduction of rote, memorised facts. This is because multiple choice questions can often be answered just by recognition of the correct answer or even by guessing.

Short answer questions usually require brief sentences or phrases. The value of these depends on the tasks posed in the questions and whether they are asking for understanding and application or just requiring recall of something mentioned in the course. Therefore, if students know these are to be the main assessment procedures they will often realise that they only need undertake surface learning. They can be useful as a small percentage of assessment to see if students are familiar with the course content. They do however encourage 'coverage' in teaching and learning. It is recommended that the content of course should be examined to determine the critical concepts that students need to learn, what is most recent and what can be left out, and the best way to assess it.

Reflective Diaries, Literature Reviews, Essays and Other Strategies to Encourage Deep Learning

If students are to demonstrate deep learning then they need to; provide an integrated and related response to a question; understand and transform the knowledge so that it fits with their context and prior knowledge; apply theoretical knowledge and facts to a practical situation or problem; and perhaps cases that go

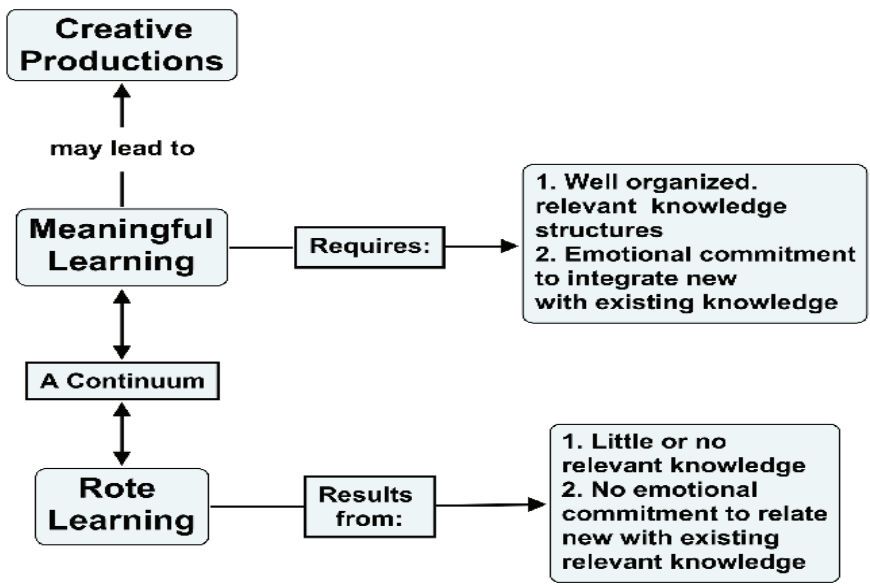
beyond the knowledge given and search for new information or encourage theorising. All these activities can be prompted by diaries, literature reviews and essays. They can be used to measure deep learning and understanding depending on how they are planned and presented.

However, even these assessment tasks can be undertaken using surface approaches if students just string together quotes without relating them to each other or the topic, write without producing a logical argument, quote secondary sources , or use 'padding' and irrelevant comments. At first glance such surface work might appear to be comprehensive. The responses are often long and contain long reference lists. It is possible for new lecturers and assessors to be 'snowed' by such presentations on the grounds that the student has done a lot of work. Usually the student has done a lot of copying without reflecting on what the material really means.

Another strategy is to ask students to write a letter to a friend describing what they have learned in a course. The letter to a friend requires the student to describe in detail what they have learned in a course or topic. It should lead to understanding and application if the task is worded so that the student must summarise, integrate and apply the knowledge to a specific context (Trigwell & Prosser, 1990; Biggs & Tang, 2007).

Concept maps, once students have been taught how to use them, can also provide a very useful method for understanding and summarising information. They can also be used in preparation for writing or as an assessment tool in itself which can be graded on the content and number and kinds of links (Novak & Canas, 2006).

Below is a simple concept map describing learning taken from Novak and Canas (2006). It shows that learning can vary from highly rote to highly meaningful. Creativity results from very high levels of meaningful learning.



Case Studies or Problem Based Learning

Both case studies and problem based learning have the expectation that the students will understand theoretical material well enough to apply it to a professional problem. They can be used to encourage deep learning and understanding. For example, students can be required to work with a case study of a problem which they can discuss using information from their reading. The final outcome can be presented as an individual written piece of work and /or as a group presentation with each student indicating how they contributed.

Another approach is to ask students to use a journal article of a research project as a model for similar research. This will involve them in searching the relevant literature. They can do their research using a sample with smaller numbers than the model. If a group of students do the project, enough data can be collected to make the results worthwhile and they can compare their results with those in the original article.

Problem based learning (PBL) is more than just assessment. It can provide the bulk of teaching in a course and is becoming more usual in medical and health related areas. In addition to PBL, progress tests of outcomes can be used, clinical skills can be assessed using simulated or real patients and this can be achieved in writing or by discussion. The central role of PBL is to develop problem solving skills and reasoning in clinical situations; it assesses functional knowledge and whether knowledge learned in context can be transferred to a practical situation. Problems need to be carefully prepared and content monitored and presented in written or electronic form, perhaps with cartoons and humor if possible.

A good issue for PBL or a case study calls for integration of disciplines in the solution, raises options that stimulate discussion, causes students to activate and use prior knowledge, requires them to obtain new knowledge, causes participants to elaborate and explain, depends mainly on self directed learning and causes students to meet intended deep learning outcomes (Modified from Johnson (2002) in Biggs and Tang (2007).

Examinations

All the above kinds of assessments can be used in examinations. However, some are more appropriate to measuring understanding and its organisation. In addition, if students are allowed to take a sheet or two of summarised material into the examination it should encourage them to select and integrate material in advance and lead to better demonstration of understanding.

Conclusion

This chapter deals briefly with deep learning and constructive teaching to facilitate it. It has been applied here to teaching and learning at the university level, but should be implemented in appropriate ways at all levels of education. In fact, constructivist learning is usually used in early childhood, but changes to transmissive teaching when students start school in most countries, but certainly in the Pacific. It would be ideal if students entered the university level being more used to finding and constructing knowledge for themselves. However, it is not too

late to change their approaches to learning at tertiary level. They might not like it at first and assess the teaching as bad because they are not being given all the information they think they need to memorise for success. However, after a while such teaching can lead to empowerment and to students feeling in control of their own learning.

References

Biggs, J. (2003). *Aligning teaching and assessing to course objectives*. LTSN Generic Centre, Learning and Teaching Network, Higher Education Authority, United Kingdom.

Biggs, J. & Tang. C. (2007). *Teaching for quality learning at university*. Open University Press: Buckingham, United Kingdom.

Boulton-Lewis, G. M., Marton, F., Lewis, D.C. & Wilss, L.A. (2004). A longitudinal study of learning for a group of indigenous Australian university students: Dissonant conceptions and strategies. *Higher Education*, *47*(1), 91-112.

Boulton-Lewis, G.M. (2004). Conceptions of teaching and learning at school and university: Similarities, differences, relationships and contextual factors, Invited article for Special Issue of *European Journal of School Psychology, 21*(1-2), 19-38.

Boulton-Lewis, G.M., Lewis, D. & Wilss, L. (2001). Changes in conceptions of learning for Indigenous Australian university students. *British Journal of Educational Psychology, 71*, 327-341.

Brownlee, J. (2001). Knowing and learning in teacher education: A theoretical framework of core and peripheral epistemological beliefs. *Asia Pacific Journal of Teacher Education and Development, 4*(1), 167-190.

Brownlee, J., Boulton-Lewis, G. & Berthelsen, D. (2008). Epistemological beliefs in child care: Implications for vocational education and course design. *British Journal of Educational Psychology, 78,* 457-471.

Brownlee, J., Berthelsen, D., & Boulton-Lewis, G. (2010). Toward self-authorship in child care students: Implications for working with children and their families. In M. B. Baxter Magolda, E. G. Creamer & P. S. Meszaros (Eds.), *Development and assessment of self-authorship: Exploring the concept across cultures*. Sterling, VA: Stylus.

Dahlin, B. & Regmi, M.P. (1995, August). *Conceptions of learning among Nepali students*. Paper presented at the 6th European Conference on Learning and Instruction in Njimegen, the Netherlands.

Dakuidreketi, M. (1995). *Factors contributing to academic under-achievement in first year native Fijian students in science courses at the University of the South Pacific*. Suva: University of the South Pacific.

Hammer, D. (2003). Tapping epistemological resources for learning physics. *Journal of Learning Sciences, 12*(1), 53-91.

Hofer, B., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67*(1), 88-144.

Kuhn, D., & Weinstock, M. (2002). What is epistemological thinking and why does it matter? In B. Hofer & P. Pintrich (Eds.) *Personal epistemology:*

The psychological beliefs about knowledge and knowing. Mahwah, NJ: Lawrence Erlbaum.

Marton, F., Dall'Alba, G., & Beaty, E. (1993). Conceptions of learning. *International Journal of Educational Research, 19*, 277-300.

Marton, F., Watkins, D. & Tang, C. (1997). Discontinuities and continuities in the experience of learning: An interview study of high-school students in Hong Kong. *Learning and Instruction, 7* (1), 21-46.

Meyer, J.H.F. & Boulton-Lewis, G.M. (1999). On the operationalisation of conceptions of learning in higher education and their association with students' knowledge and experience of their learning. *Higher Education Research and Development, 18*(3), 289-302.

Mugler, F. & Landbeck, R. (1997). Learning, memorisation and understanding among distance learners in the South Pacific. *Learning and Instruction, 10*, 179- 202.

Nabobo, U. (2001). Education and Indigenous Fijians: Challenges – the year 2000 and beyond. *Directions*, *23*(1), 56-74.

Novak, J. D & Canas, A.J. (2008). The theory underlying concept maps and how to construct and use them. Florida Institute for Human and Machine Cognition. Pensacola Fl: US

Setsuo, O. (2004). *Cultural Influences on Academic Achievement in Fiji*. Paper at the 2004 AARE conference, Melbourne, Australia. Accessed 13/10/11 from www.aare.edu.au/04pap/ots04633.pdf.

Thaman, K.H. (1995). Concepts of learning, knowledge and wisdom in Tonga and their relevance to modern education. *Prospects, 25*(4), 723-733.

Tynjälä, P. (1997). Developing education students' conceptions of the learning process in different learning environments. *Learning and Instruction, 7*(3), 277-292.

Chapter 11: Attrition Rates of Solomon Islands Students in Higher Education

Jeremy Dorovolomo and Jack Maebuta

Introduction

Student attrition is defined by Park, Boman, Care, Edwards, and Perry (2009) as departure from a program without successful completion. In other words, Polinsky (2003) defines student attrition as students leaving the university without obtaining a degree. Polinsky stresses that there are two types of attrition. The first is positive attrition in which a student leaves, but may have met his or her objectives. For example, a student may move onto another educational institution to complete a degree after gaining certain knowledge from the other (Polinsky, 2003). Attrition rates can often be higher if positive attrition is not taken into account (Long, Ferrier, & Heagney, 2006). Negative attrition, on the other hand, is when students depart without meeting their objectives and without obtaining a degree (Polinsky, 2003). Opposite to attrition rates, are persistence rates (Park, Care, Boman, Edwards, & Perry, 2009) or retention rates (Polinsky, 2003), which relates to the satisfaction of student needs resulting in the completion of their degrees.

Retention rates are a concern for higher education institutions as at-risk students increase. By identifying at-risk students, proactive interventions can take place and help facilitate their success. Retention, persistence, and graduation rates are often used to indicate university success. Retention is a critical aspect of institutional success, as high retention rates translate into higher revenue for the university (Polinsky, 2003) and a significant attrition rate means lost income for the university (Freer-Weiss, 2005) and also sponsors, as it costs the Solomon Islands Government approximately $75, 000 SBD to sustain each student per year at Fiji (Lezutuni, 2011). Free-Weiss (2005), however, states that attrition rates go beyond merely lost income. It also translates into loss incurred through human potential not being nurtured to its full. Students' potential to maximally impact on society may be derailed. Furthermore, Free-Weiss argues that public institutions, such as most universities, are accountable to stakeholders for the retention and completion rates of students. Thus, Metz (2004) states the importance of studies

and data that are specific to institutions in order to bolster the better understanding of student persistence and departure.

The Solomon Islands Situation

In early 2009, 105 Solomon Islands students, who were studying at the University of the South Pacific (USP) in Fiji, were terminated of their overseas study awards. The Solomon Islands Ministry of Education warned students who are on scholarships overseas to perform well. The Ministry of Education stressed that sending students abroad on scholarships are not cheap. In addition, the Ministry of Education emphasized that scholarships are not a right but a privilege. Others are also entitled to this privilege but cannot due to limited spaces (Solomon Star, 2009). A focus on the Solomon Islands' student attrition in Fiji is essential because of the continuing attrition including 60 students whose overseas scholarships were terminated in the second semester of 2010, of whom 88 per cent of them were from USP Fiji (Atai, 2011). Atai further explains that it is vital to investigate the real causes of these students' attrition rate at USP Fiji, usually caused by instructional incompetence, instructor attitudes, and the university environment. In addition, Atai stresses that this does not reflect well of stakeholders such as the Solomon Islands High Commission in Fiji, the S.I. National Training Unit (NTU), and the USP (Atai, 2011).

The NTU is the section of the Solomon Islands Ministry of Education that looks after government scholarship awards. It often is the site of many public debates as students and parents attempt to secure scholarships. There are issues about students having to travel from far lying islands and would usually be late to sort formalities, by then spaces were taken up by others (Daiwo, 2009). There is also debate over the relevance of priority areas the NTU uses to award scholarships (Pitu, 2009). When they are in Fiji, late allowances are an issue regularly faced by Solomon Islands students. Late allowances do not permit timely acquisition of required textbooks and class materials. It also has implications for accommodation rentals, as many of them rent outside of the USP campus. These cause a lot of stress on students when they should be concentrating on their studies weeks into the semester (Mataiwaqa, 2010). Solomon Islands students often struggle to secure accommodation as home owners require bonds and the first month's rent, aggravated when allowances are delayed. With high rental charges, students combine in numbers to rent a home, often resulting in over-crowdedness, not conducive to a positive study environment (Taloiburi, 2009).

The attrition of Solomon Islands students at USP in high numbers seem to continue as in the first semester of 2011, 68 scholarship awardees of USP Fiji were given termination letters after having failed many courses (Lezutuni, 2011). Soleoniru (2009) feels that little attention is given to the high failure rate of Solomon Islands students at USP Fiji and that the Solomon Islands Ministry of Education and the USP must be proactive in investigating and planning practical ways to curb the attrition rate. Soleoniru states that such investigation may need to include learning styles and competencies, and social issues. Therefore, this study asks the following research questions:

- What do Solomon Islands students of USP Fiji perceive to be the causes of the high attrition rate?
- What measures do Solomon Islands students suggest should be done to curb the attrition rate?

Conceptual Framework

The reasons for negative attrition is being clustered in three broad categories as purported by Polinsky (2003). They are (i) student characteristics, (ii) life circumstances, and (iii) the university experience or environment. These categories are useful in communicating and planning retention strategies. Student characteristics may include ethnicity, gender, poor academic preparation or low socio-economic status. Life circumstances, as a category of negative attrition, relates to issues such as financial problems, family obligations, work demands, or working many hours while attending university. University experiences or environment, the third category, students may lack interaction with staff members and/or peers, unsatisfactory instruction, low self-confidence, unrealistic expectations, or lack of academic social integration.

Methodology

This study is a qualitative investigation that involved 17 participants. 15 of the participants are male and 2 of them females, all of whom are Solomon Islands students studying at USP Fiji. These participants were purposefully sampled (Cohen, Manion, & Morrison, 2000), which involved handpicking cases on the basis of their typicality, being Solomon Islanders. Moreover, these participants were handpicked from all of the nine provinces of the Solomon Islands. 'Informal conversational interview' (Patton, 1990) questions flow from the immediate issue and context. The two main questions surround the 'causes of Solomon Islands students' attrition rates' and their 'suggestions for addressing such unacceptable departure rate'. The rest of the questions and discussions were probed around these two major foci as long as it does not deviate from the aims of the study. The interviews were conducted in *pidgin,* the *lingua franca* of the Solomon Islands. Consent was received from all participants, including the permission to record the interviews. All interviews were transcribed by the researchers.

Data Analysis

The study incorporates Evans' (2002) method of analyzing qualitative data. Such process involves coding and categorization. Coding is sorting data with commonalities to categories. Categories are conceptual aspects of theories. Evans also states that guidelines used to construct categories are that the categories should a) reflect research purpose, b) be exhaustive, c) originate from a single classification principle and, d) be mutually exclusive. Exclusive means that a particular data or statement clearly belongs to a category and would not fit into the other categories at all. As suggested by Evans (2002) the interviews were analyzed utilizing the following steps:

i. The first-level of coding involved compilation of lists from the raw data. It is a simple, straightforward and superficial initial analysis. For example, a list of important materials extracted from the interviews totaling about 95 was constructed. The list is without any particular order, it is a simple and straightforward initial listing. Included in this long list, for instance, are 'wasteful spending of money', 'fear going to lecturers for help', 'students stick to themselves and need to be involved' or 'incompatible lodging mates at rented home'.

ii. Next, this large list is further refined and reduced by sorting them into categories. These categories were facilitated by Polinsky's (2003) conceptual framework for negative attrition which consists of student characteristics, life circumstances, and university experience or environment. Items were then put into these categories and further sorted into sub-categories, as diagramed in Figure 1.

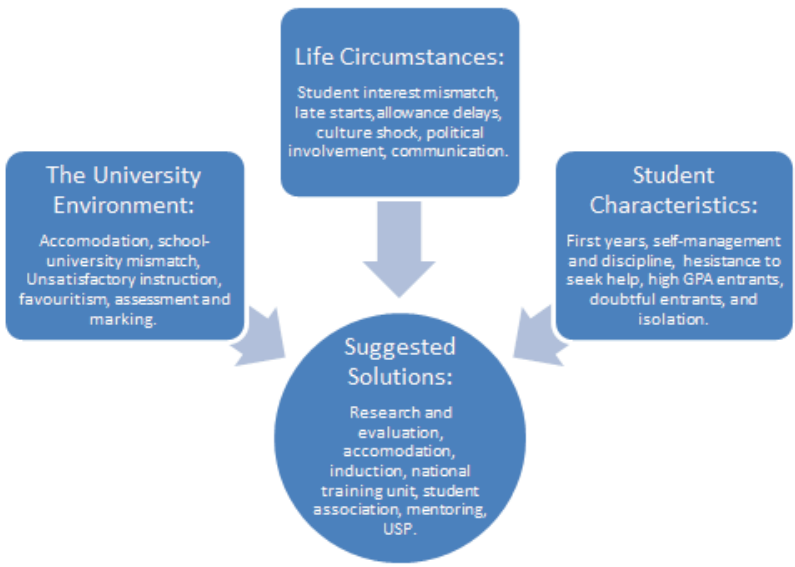


Figure 1: Categories and sub-categories.

The four skills that were used to establish these categories were:

1. Recognition and elimination of overlap.

Overlap is avoided by reducing the long list of coded items. In addition, what (Evans, 2003) calls *systematic comparative pairing,* was conducted to ensure elimination of overlaps. This is implemented by comparing each category to each other. For example, if six categories were generated, A, B, C, D, E, and F, compare A with B, C, D, E, F. Category B is compared to C, D, E, and F, while C with D, E, F, and so forth. In this study, there are four categories thus A (Student Characteristics) is compared with B (Life circumstances), C (University

environment) and D (Solutions). Category B is compared to C and D and so forth. This is also repeated for the sub-categories.

2. Recognition and incorporation of outlier and atypical cases.

Outlier cases are those that do not conform to any of the patterns identified. These outliers, for example, one of the items stored as an outlier was the 'weather changes in Suva'. It was eventually incorporated into a sub-category of the 'university environment'. This and other outliers were later included.

3. Application of appropriate levels of the basis of categorization.

There may be multiple levels of categorization with a kind of hierarchy of categories, sub-categories, sub-sub-categories and so on. This study went down only two levels of categorization, that is, categories and sub-categories, as can be seen on figure 1.

4. Presentation of categories.

An aspect of presenting categories is labeling. The initial category of this study was provided by the conceptual framework but the sub-categories needed to be labeled. It was ensured that these categories accurately reflect the category's nature and constitution. Repeating the exercise at 1 above is useful in finding a category that is sufficiently all-encompassing of its own.

Discussions

This research aimed to investigate the causes of the high attrition rate of Solomon Islands students at the USP and propose measures to militate such departure rate.

Student Characteristics

In terms of student characteristics, findings indicate that first year Solomon Islands students are more likely to face difficulties at the university, even though students who are not in their first year also do fail courses. Gilmer (2007) also found that students in Year One at university are normally the group of highest attrition. However, Alston et al. (2005) cautioned that it is also important to note other groups that are vulnerable to attrition such as female postgraduate students; the mature-aged, many who are studying via distance and part-time and who usually have work and family responsibilities. Furthermore, it was found that another characteristic that contributes to the departure of Solomon Islands students at the university is isolation. Students who isolate themselves away from others, including the activities of the Solomon Islands Students' Association (SISA) are seen to be at risk of failing courses. These students are often not seen around SISA cultural and social activities, or the activities of the university. Sawchuk (2002) advises students to be involved in university clubs, groups and organizations, so that they have connectivity to both new friends and the institution. This should be encouraged because students that are actively involved

in campus activities and feel a part of the university community are more likely to remain (Murtaugh, Burns, & Schusters, 1999).

Relating to students' inactive campus engagement, the study found that Solomon Islands students who face attrition are those who are hesitant and fear seeking help. These students usually would be afraid to ask questions in class even if they might not know something. Outside of the classroom, such students are hesitant to consult staff, as well as their own peers. In addition, often these students do not utilize support services at the university such as the academic and library services. Mannan (2007) emphasizes that the extent at which students are integrated into the social and academic systems of the university often decides the persistence or departure of students. Students have a greater commitment for completion when the degree of their integration into the university is higher (Mannan, 2007). The ability of students to persist through to graduation depends on their integration into the intellectual and social membership of the university. This makes early integration into the university social and academic environment pivotal (Swail, 1995). On the other hand, student departure is often a reflection of individual maladjustment to the academic and social milieu of the university (Liu & Liu, 1999). These notions depict that implications for attrition stems from students' own inadequacies to source help and adjust positively, which holds some relevance, but the institution also has a major role to play. Lovitts (1996) argued that attrition has less to do with what students bring into the university but rather has more to do with what happens to them when they have been admitted. Universities would need to focus on dealing with forces that divide and isolate students from peers and the faculty. It is vital that students do not exist in silence but are provided with mechanisms through which students can voice their concerns about their programs and treatment without fear.

Participants of the study also noted that a general lack of self-discipline and self- management were a characteristic of Solomon Islands students who are prone to departure. Such students lack the ability to prioritize the focus of their activities and as a consequence wastefully use their time. These are evidenced through not being up-to-date with assignments, leaving exam revisions too late, missing classes, excessive drinking and clubbing. There had been Solomon Islands students who have used up their allowances through drinking and clubbing and relied on other students for their sustenance during the semester. These practices cause students' chances of retention to suffer, as they often would fail their courses and eventually be terminated by study sponsors. Daley (2010) reiterates that time management is an issue for many students. They often do not realize that it is a function of self-management and need to understand implications of wasting it.

It was agreed upon by participants that Solomon Islands students that are sent to study at the USP Fiji normally enter with high grade point averages (GPA). This is due to the very limited tertiary spaces that are available nationally each year. Therefore, only the best of the country are usually sent abroad for university studies. As such, the argument is that reasons for attrition would not necessarily be a low entry GPA but rather other factors that contribute to poor academic performance. Murtaugh, Burns, and Schuster (1999) wrote that retention at university increases with students who have higher high school grade point averages. This is also supported by Fredda (2000) who found that students with

lower grade point averages at high school have the greatest attrition rate. Molnar (1996), who studied about 3,000 students at a university in Florida, went further by arguing that it is not only about their high school GPA. Molnar concluded that the first semester GPA is an important retention factor, not just their high school average. Molnar purports the power of the first semester GPA alone to predict student persistence. In the case of Solomon Islands' students studying at the USP, if they generally enter university with high GPAs, causes for their attrition is certainly multi-dimensional. Participants to the study, however, highlighted that there are students who may be doubtful entrants to university. These students secure a space due to political instruction rather than through merit. Such students are more likely to have a lower GPA and as a result, a higher likelihood for attrition.

Life Circumstances

A situation that does not help with a more positive retention rate for Solomon Islands students at the USP is the delay of study allowances from the Solomon Islands Government. Late allowances defeat students psychologically even before they begin. Being at a country other than their own, would have put students through unnecessary stress, when allowances are received late. A participant likened late allowances to being late for the semester, as they are at the university physically but have limited focus on their studies. Of course, in addition to late allowances, there are times when Solomon Islands students arrive late for the semester. Late arrival is a circumstance the study found that contributes to the attrition of students. Preferably, students should arrive during the orientation and academic counseling week. Freer-Weiss (2005) noted that allowing students late admissions also contribute to the attrition rates, as they inadequately catch up with academic work. As such, late admissions and allowances are areas that require attention to improve Solomon Islands student retention.

A mismatch between student interests and the program of study approved by the Solomon Islands National Training Unit (NTU), in some cases, were seen to contribute towards attrition. The NTU may at times adhere to government priority areas and awarded various students an area of study that did not match their interests. Students in this situation are not prevalent. Nevertheless, the associated lack of motivation was viewed to add to Solomon Islands students' attrition rates. Departure often occurs because there is a mismatch between students' intentions and goals, and obstacles within the university environment and outside of it, which may prevent them from effective informal and formal academic integration (Freer-Weiss, 2005; Metz, 2004; Pavel, 1991). In order to sufficiently tackle issues of subject-student interest mismatch, and other relevant matters, the study found that improved communication is salient. The communication between the students, SISA, and the NTU is vital to sorting various issues, if unsorted, might affect student retention.

Culture shock is a circumstance many Solomon Islands students experience when they arrive in Fiji. The costs of goods generally are lower and the night life is much more vibrant, particularly in Suva, than in the Solomon Islands. Frequenting other attractions can divert students' attention from their real purpose of being at university. On another matter, a popular situation when Solomon

Islands students are in Fiji, relates to having to look for accommodation, as the USP does not have enough campus accommodation. There are a variety of circumstances that occur when students rent outside of campus. Participants of the study reported situations of lodging with incompatible occupants, renting too far from campus, and landlords charging exorbitant amounts of rent. In order to pay a large rent, students combine in numbers, which results in overcrowded conditions that are not conducive to positive academic outputs. Moreover, there is report of over-controlling landlords, including not being allowed to cook beef in the rented home due to the religious beliefs of the owners or not to play on the yard. On the other hand, there are students who have mutual relationships with their landlords and rent from them long-term. It was felt that students looking for rental homes are not helpful in getting students to focus solely on studies. It is vital to eliminate the need to look for a home, food, cooking and travel, by building enough student accommodation and affordable catering on campus.

The University Experience and Environment

The respondents also highlighted that Solomon Islands students' attrition from USP is also a product of a high school-university environment difference. While at high school, particularly if they were boarding, the school rules are very strict, compared to the relative freedom they receive at university. It was further explained that at home in the Solomon Islands, students would be given minimal amounts of money by parents and guardians, and all of a sudden they would need to manage a much larger sum of funds by themselves. Additionally, participants alluded to the difference in teaching and learning environment between the high school and the university. Learning in the high school may chiefly be formal study in the classroom, while more independent study is expected at university. Most of the time is arranged and managed at the high school, compared to self-managing your own at university.

Unsatisfactory instruction is a reason revealed as a contributor to student attritions. There are cases of very poorly run tutorials with tutors that lack the knowledge and vigor to stir discussions that are expected at university, and where the needs of differing learning abilities are unmet. Participants mentioned poorly delivered lectures which comprise the inability to simplify concepts and conveniently convey content. Disturbingly, study participants stated that there are cases of lecturers who teach to fail rather than teaching for learning. They take a lot of pride in situations where students find things difficult. It is a very strange phenomenon when teaching aims to simplify material for student consumption and there exists lecturers who take pride in making sure students do not learn. This strange phenomenon was explained by participants to be different from challenging students for higher order learning, it is merely strange teaching behavior. This is cause for great concern. Often, lecturers think that they possess nothing to do with the retention rates of the university, but they in fact significantly do. According to Mansfield, O'leary, and Webb (2011) instructors are the most important factor in the retention process. Positive relationships between the faculty and students contribute to higher retention rates. It needs to be realized that instructors are pivotal to the retention of students. What happens in the classroom (and out) is critical to student retention. Conversely, students can

also tell if the lecturer is genuinely interested in their learning and provides a stimulating classroom environment. Thus, university staff members need to know the important role they play in retention (Polinsky, 2003). The onus to retain students belongs to everyone. Various courses in the sciences and accounting attract higher attrition at USP and would require separate attention in its pedagogy and assessment.

A finding of serious concern is that of favoritism. There is a common complain of certain lecturers who favor students of their own race. It is also interesting that participants of this study, when referring to favoritism, only mentioned lecturers of a particular race alone and none from all the other diverse staffing of USP. Special treatment exposes itself in the marking of activities and assignments, when certain students of the same race of the staff receive higher marks even if their works are not of quality. It was expressed by one of the participants that the favoritism is glaringly obvious that the littlest of child could tell that there is special treatment occurring. Liu and Liu (1999) state that racial discrimination, cultural alienation and awkward relationships with the race that dominates positions in the university, are challenges students face. In America, Taylor (1999) studied Native Americans at a predominantly white university in the United States and found that factors that affect their persistence at higher institution are the feeling of alienation as a result of academic difficulties and insufficient university support, skin color and appearance, racial hostility and stereotype, and the lack of role models.

With regards to assessment and assignments, it was found that certain lecturers do not mark assignments properly. There would be assignments with no feedback. Constructive feedback is meant to be educational and enlighten students for further progress and growth. In addition, participants said that students can tell if an assignment is poorly marked and hastily awarded. Another finding that requires serious consideration is that Solomon Islands students find certain staff accents to be very difficult to understand. It was stressed that communication is vital in the teaching and learning process. However, some heavy accents jeopardize that basic communication between the teacher and student to take place. A participant explained vehemently that it is of no use to even appear at the lecture as most of the lecture of staff with a difficult accent will not be understood. One of the participants went as far as changing a program major due to difficulties in comprehension in one of the science courses.

The following measures were, therefore, recommended by the study participants to alleviate the attrition rate of Solomon Islands students doing studies in Fiji and may be of general relevance elsewhere students are enrolled.

Research and Evaluation

Participants suggested that the NTU, the Education Abroad Advisor, whose is based at the Solomon Islands High Commission in Fiji, and the USP, to conduct ongoing research and evaluation of various aspects of students' lives at university in order to better understand and find solutions to challenges. These investigations should not be on students alone, but encompass wider issues of the university and its environment. Furthermore, it is important that the SIG should always make evaluations of whether they are getting their money back for the

investment put into sending students to USP Fiji. Swail (1995) also support the idea that institutional research should be a salient component of university undertakings in order to improve teaching and learning on campus. Swail stresses also that all campus and universities are different which requires contextualized research on teaching and learning. Institutional research outputs should be organized and managed to allow practitioners to utilize in campus improvement. This study focused on USP Fiji, whose contextual peculiarity, poses difficulties or advantages, which need continual investigation.

Induction

It was suggested that Solomon Islands students should have an induction at the beginning of the semester that may comprise a variety of matters including managing their money, sourcing support services, balancing social life with academic work, and university life. This could be SISA and NTU driven, but personnel to deliver could be recruited relevantly. A comprehensive orientation at the beginning of the semester in which students are made aware of the pace and intensity of university and its programs is vital (Rouse & Rooda, 2010). Early campus acclimation and success is critical. Academic achievement in students' first semester is often sustained over time. As such, Gilmer (2007, p. 15) stresses that "the way students start their college career often indicates how they will finish". Therefore, it is the onus of higher education institutions to provide a balanced experience for students throughout their enrolment, giving positive momentum to early orientation.

Swail (1995) reiterates further that student orientation is important to students' university experience. Nevertheless, this should go beyond simply providing information and enable early contact with relevant peers and staff. Orientations can also bridge gaps such as adjustment from rural life to urban or small school to a large university. Moreover, Pavel (1991) argued that university orientation activities should also be conducted in the community rather than merely within the university. There needs to be strong institutional outreach that is backed by aggressive academic support. Swail (1995) adds that it should not just be induction but also ongoing counseling over the semester. Swail states that there are four basic types of counseling that universities need to recruit in order to increase retention. They are academic, career, social and financial counseling. Academic counseling provides students information regarding course selection and their progression throughout their programs. Career counseling ensures students are studying what they are interested in and work towards reaching their goals. Social counseling provides psychological support while financial counseling helps advice students to budget appropriately.

Mentoring

Mentoring services that exist at the faculty level have been very vibrant recently at the USP, far more than before. However, it was mentioned that Solomon Islands students may not be utilizing them. As such, mentoring can be taken down a few levels to the student association level, in which the SISA could cluster students doing the same study areas to a high achieving Solomon Islands

senior student. Such peer tutoring can occur twice a week in a relaxed, interactive atmosphere. Participants also felt that these peer tutors should be paid some money for their services to enable sustainability of the peer mentoring activities. Such established peers can offer assistance to students with specific academic difficulties, study skills, note taking, listening skills and communication (Sawchuk, 2002; Swail, 1995). These mentors should be carefully chosen and given training to ensure there is positive role modeling and quality guidance (Mansfield, O'leary, & Webb, 2011; Rouse & Rooda, 2010; Swail, 1995).

Accommodation

Participants emphasized the need to build more student accommodation in or near the campuses. If the USP could provide affordable accommodation, food, and an attractive campus life, it should minimize students' stress relating to accommodation on the free market. Living on campus can help students' social and academic integration (Swail, 1995). This is a chronic situation that needs addressing at the university level.

The National Training Unit

The NTU and SIG should first of all, ensure students and allowances are on time for the semester, preferably before the orientation week. Participants recognized that the NTU has had a tougher stance on students who fail courses. They also acknowledge that the NTU have systems in place to allow students another chance. For example, students who fail courses can re-do those at their own expenses to qualify for the re-instatement of scholarships.

The Solomon Islands Students' Association

The SISA is a vital organization in terms of the organization and affiliation of Solomon Islands students while in Fiji. SISA does a great work in promoting the social and spiritual integration of its members to their new environment. It also provides a forum for discussion for cultural groups, who make up its membership. Participants felt that the NTU can use the SISA to play more than its mostly social role to include other areas. For example, participants recommended that there could be, for instance, a complaints committee, so that students that have a concern over favoritism, poor teaching, or other matters, can raise them. The committee then reports them to relevant authorities. Or there can be an 'academic committee' within SISA, whose concerns revolve around the academic integration and performance of Solomon Islands' students.

The University of the South Pacific

Participants recommended that USP staff members, that are not certified teachers, should undertake teaching qualifications to improve their pedagogical proficiency. The USP School of Education offers a Graduate Certificate and Diploma in Tertiary Teaching, but whether those who needed it most are taking it or not, remains unclear. However, this course provides tertiary educators an avenue to

improve their pedagogical skills. Often underestimated, but the role of tutors and lecturers are critical to students' success. Therefore, it is important that tertiary educators have good subject knowledge, pedagogical and interpersonal skills, and are able to identify at-risk students (Higgins, 2004).

Participants also recommended that USP has policies that are favorable to student retention. An example provided was that if a student misses out on coursework marks at 35 out of 40, they should not be failed and made to do the whole semester again. A supplementary work could easily have been conducted. Referring to a Papua New Guinea higher education institution, Mannan (2007) emphasizes the need for a relevant retention policy that is informed by institutional assessment. Notably, this is also the only Pacific literature the chapter managed to find on the topic of university retentions and attrition in the Pacific Islands. This indicates the importance of this study in generating more institutional research and debate on the area of student attrition and retention. Another policy area the USP need to look into is to require more racial diversity in the staff composition, which is purported by Liu and Liu (1999) to enable higher retention rates. In the case of the USP, the staffing is racially diverse, but it is still highly dominated by Fiji and more must be done to recruit staff from other Pacific Islands Countries.

Conclusion

In many instances, institutions view that campuses exist for the academic growth of its students. As a result, there is neglect to view student retention from a fuller perspective, rather than from the academic alone. No campus is exempt from the responsibility of providing an appropriate social environment for the student. Opportunities for students to assemble and mix are vital to promoting social growth. Coordinated student associations and groups can help in this process. Student groups can be mobilized to organize campus events, rather than university-generated ones. This will not only promote greater student ownership, but also encourage social integration. Academically, efforts to facilitate academic integration of students can include informal faculty-student activities that promote positive interaction. The recruitment process should be more than simply recruiting students. It should be 'recruitment for retention' rather than 'recruitment for enrolment figures'. So often, it is only the figures that various higher education institutions are bothered with and seriously neglect the retention of students. Furthermore, in multi-racial and multi-ethnic owned universities such as the USP, the needs of one ethnic group would not be the same for the others. Thus, highlighting the need to investigate and find solutions to unique challenges the diverse student body faces. Retention programs should therefore be focused vigorously on students. A vibrant support program within the USP in collaboration with Pacific Islands Countries and sponsors of scholarships can have a telling and positive impact on retention and persistence rates of Solomon Islands students and other students who make up the university community.

References

Alston, M., Allan, J., Bell, K., Brown, A., Dowling, J., Hamilton, P., McKinnon, J., McKinnon, K., Mitchell, R., Whittenbury, K., Valentine, B., Wicks, A. & Williams, R. (2005). 'SERPS up': support, engagement and retention of postgraduate students – a model of postgraduate support. *Australian Journal of Adult Learning, 45*(2), 172-190.

Atai, J. (2011). *SISA president hits back on students axed.* Retrieved February 21, from the Solomon Star Web Site: www.solomonstarnews.com/.../10146-sisa-president-hits-back-on-students- axed

Cohen, L., Manion, L. & Morrison, K. (2000). *Research Methods in Education* (5th edn). London: Routledge.

Daiwo, R. B. (2009). *NTU biased decision*. Retrieved February 15, 2009, from the Solomon Star Newspaper Web Site: http://solomonstarnews.com/index2.php?option=com_content&task=view&id=6518&pop…

Daley, F. (2010). Why college students drop out and what we do about it. *College Quarterly, 13*(3), 1-5.

Evans, L. (2002). *Reflective practice in educational research.* London: Continuum.

Fredda, J. V. (2000). *An examination of first-time in college freshmen attrition within the first year of attendance.* Nova Southeastern University, Florida.

Freer-Weiss, D. (2005). Community college freshmen: Last in, first out? *Journal of Student Retention, 6*(2), 137-154.

Gilmer, T. C. (2007). An understanding of the improved grades, retention and graduation rates of STEM majors at the academic investment in Maths and Science program of Bowling Green State University. *Journal of STEM Education: Innovations and Research, 8*(2), 11-22.

Higgins, B. (2004). Relationship between retention and peer tutoring for at-risk students. *Journal of Nursing Education, 43*(7), 319.

Lezutuni, B. (2011). *68 students issued with termination letters.* Retrieved 28 July 2011, from the Island Sun Newspaper web site: http://www.islandsun.com.sb/index.php?option=com_content&view=article&id=3347:68-students-issued-with-termination-letters&catid=36:latest-news&Itemid=79

Liu, E. & Liu, R. (1999). An application of Tinto's model at a computer campus. *Education, 119*(3), 537-543.

Long, M., Ferrier, F. & Heagney, M. (2006). *Stay, play or give it away? Students continuing, changing or leaving university study in first year.* Centre for the Economics of Education and Training, Monash University, Australia.

Lovitts, B. E. (1996, April). *Who is responsible for graduate student attrition – the individual or the institution? Towards a high explanation of the high and persistent rate of attrition.* Paper presented at the Annual Meeting of the American Education Research Association, New York, U.S.A.

Mannan, A. (2007). Student attrition and academic and social integration: Application of Tinto's model at the University of Papua New Guinea. *Higher Education, 53*(2), 147-165.

Mansfield, M., O'leary, E. & Webb, A. (2011). *Retention in higher education: Faculty and student perceptions of retention programs and factors impacting attrition rates.* Indiana University South Bend, U.S.A.

Mataiwaqa, J. (2010). *Mute education attaché.* Retrieved August 9, 2010, from the Solomon Times Newspaper Web Site: http://www.solomontimes.com/letter.aspx?show=3360

Metz, G. W. (2004). Challenge and changes to Tinto's persistence theory: A Historical review. *Journal of College Student Retention, 62*(2), 191-207.

Murtaugh, P. A., Burns, L. D. & Schuster, J. (1999). Predicting the retention of university students. *Research in Higher Education, 40*(3), 355-371.

Park, C. L., Boman, J., Care, W. D., Edwards, M. & Perry, B. (2009). Persistence and attrition: what is being measured? *Journal of College Student Retention: Research Theory & Practice, 10*(2), 223-234.

Patton, M. (1990). *Qualitative Evaluation and Research Methods*. London: Sage.

Pavel, M. D. (1991, November). *Assessing Tinto's model of institutional departure using American Indian and Alaskan native longitudinal data.* Paper presented at the Annual Meeting of the Association of the Study of Higher Education, Boston, MA.

Pitu, L. (2009). *NTU's bias decision.* Retrieved February 19, 2009, from the Solomon Star Newspaper Web Site: http://solomonstarnews.com/index2.php?option=com_content&task=view&id=6640&pop…

Polinsky, T. L. (2003). Understanding student retention through a look at student goals, intentions, and behaviour. *Journal of College Student Retention, 4*(4), 361-376.

Rouse, S. M. & Rooda, L. A. (2010). Facotors for attrition in an accelerated baccalaureate nursing program. *Journal of Nursing Education, 49*(6), 359-363.

Sawchuk, G. (2002, April 5). Money isn't sole cause of high student attrition rates. *Toronto Star,* p. 23.

Soleoniru, K. (2009). *Why are our students failing their courses at the USP?* Retrieved 21 June 2011, from the Solomon Times Newspaper Web Site: http://www.solomontimes.com/letter.aspx?show=2233

Solomon Star (2009). *Students must heed the message.* Retrieved February 27, 2009, from the Solomon Star Newspaper Web Site: http://solomonstarnews.com/index2.php?option=com_content&task=view&id=6921&pop…

Swail, W. C. (1995). The development of a conceptual framework to increase student in science, engineering, and mathematics programs at minority institutions of higher education (Doctoral dissertation, George Washington University, 1995). The Educational Resources Information Center, ED396921.

Taloiburi, E. (2009). Reducing high rate of failure at USP. Retrieved June 20, 2009, from the Solomon Star Newspaper Web Site: http://www.solomonstarnews.com/viewpoint/private-view/85-reducing-high-rate-of-failure-at-usp

Taylor, J. S. (1999, November). *America's first people: Factors which affect their persistence in higher education.* Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Antonio, TX.

Chapter 12: Encouraging Professional Communities in Teacher Education

Jeremy Dorovolomo

Introduction

The aims of this study were to investigate factors that foster the presence of the professional community and to also identify any barriers to the presence of a professional community at a Teacher Education Department (TED) of an university in Fiji. This study uses the Delphi Technique to elicit consensus from six members of the TED who consented to participate. The Delphi Technique is a multistage process using a series of sequential questionnaires or rounds linked by feedback. The three round processes by Gilson et al. (2009) were incorporated. At the third round participants provided information for a final group consensus. Findings indicate that the TED's regular seminars support opportunities for professional dialogue and social exchange, vital to the nurturing of professional communities. Despite this, there is also the need for the TED to open more venues for staff members to work, talk and reflect together. These venues may not necessarily be just formal channels but also informal 'grapevines'. Moreover, the participants agreed that the team teaching and the variety of delivery methods used by the TED to reach its students in the scattered Pacific does contribute to improved student access and learning, which should be a major focus of any professional community. The participants also concluded that the continued professionalism of the TED is the result of a group of hardworking and committed staff. On the other hand, a number of barriers to the presence of a professional community at the TED were identified through the Delphi process. There was a lack of clear Department plan such as could be guided by visionary and effective leaders. Another issue that received group consensus was the need for leadership to be more aware of the need to respect and offer support for different areas of staff expertise. Another major impediment was the heavy workloads and the issue of understaffing which restricts engagement in other useful activities and time to interact with colleagues. Moreover, the lack of organized social gatherings for staff to unwind and interact in a stress free

atmosphere also hampered social intercourse, which was felt to be crucial to building professional communities.

Background

Making schools into strong professional communities is one of the most urgent and difficult tasks for bringing about substantial and successful educational change in the new century (Hargreaves, 1997). 'Rebuilding teachers' professionalism requires 'new wine', or new ideas about the occasions for and the character of teachers' professional development; and 'new bottles', or new structures, opportunities or organizational arrangements to help teachers' efforts in rethinking technical culture; classroom expectations for students and professional roles (McLaughlin, 1997, p. 88). To perform at the highest professional levels, teachers must be empowered to become learners themselves, thus, positively impacting student learning. An avenue to articulate this is through the promotion of professional communities (Fink & Stoll, 1997). Professional communities are where teachers' collectively engage in sustained efforts to improve practices. Professional community can be conceptualized as including such dimensions as shared norms and values, focus on student learning, social trust, de-privatization of practice, collective responsibility, and collaboration (Coburn & Russell, 2008), time to meet and talk, openness to improvement, supportive leadership and reflective dialogue (Kruse, Louis, & Bryk, 1994). Preoccupation with student learning is imperative in a professional community because it is a focal obligation to which educators are held accountable and a primary source of rewards in teaching (Graham, 2001). Collective focus by teachers and lecturers, and practitioners and researchers, should develop better insights into teaching and learning through inquiry and practice (Nancy, Kathy, Michael, Jeane, & Deborah, 1997). This should be guided by a combined obligation to view that students can perform highly despite their problems and difficulties (Kruse et al., 1994). In teacher education, we have a responsibility to students and to the profession to provide the best student teaching experience possible. A quality experience can only occur if there are collective efforts by universities, schools and other relevant stakeholders (Cusimano, 1990).

Effective change and professional development cannot occur unless there are collaborations between parties, including teachers at all levels of education. This is a journey traveled over time. As a result, it should be a process of educational renewal where college and universities join schools as equal partners in the renewal of educators, with energies pooled and maximized (Sutliff, Brown, & Elliot, 1999; Maguire, 1994; Mittelmark, 2005; Williamson, 1992). These linkages would reflect strength if resources are shared such as time, facility access, gifts in kind, money and network contacts (Cousens, Barnes, Stevens, Mallen, & Bradish, 2006). Success is imminent when members believe collectively that they have what it takes to succeed (Maguire, 1994). These collaborations can be both within as well as with others outside the school. Such collaboration can mean teachers working together on various elements of teaching such as curriculum and assessment of students or producing new and different approaches to staff development (Kruse et al., 1994).

Professional communities also affirm common values on critical educational issues such as about children and their ability to learn, school priorities for the use of time and space, and the roles of parents, teachers and administrators (Kruse et al., 1994; Newman, 1996). Having regular time to meet and talk is important in instilling common values and purposes. There is often insufficient time for teachers to collaborate regularly. These teachers are less likely to engage in professional interaction if there are insufficient opportunities and expectations to do so (Leonard & Leonard, 2005). When educational professionals are provided the opportunity to deepen a discussion, explore alternative ways of educating students, critique curricula, and build networks, professional growth is inevitable. The organizational design is a clear contributing factor to a professional community (Sutliff, Brown, & Elliot, 1999). It could be highly innovative to create a team planning room for educational practices, and to endorse an 'open door' policy, permitting teachers to coalesce (Kruse et al., 1994). Farrell and Holkner (2002) said that today hybrid workspaces are required, bringing the physical and cyber places together in communications. They stress that one of the current challenges is to coordinate and negotiate the working knowledge, working relationships and work practices of geographically, temporally and culturally dispersed workforces and workspaces. Hybrid then means combining the physical and the cyber aspects of communication in improving educational practices. In other words, pens, paper and a planning room sit side by side with bandwidth connections and mobile phones, both real and virtual. Often, constraints in collaborative activities are restrictions of the workplace. Thus, allowing practitioners the space to be close to each other is crucial (Mittelmark, 2008; Nickerson & Sowder, 2002; Templin, 1992).

Educators should take advantage of school structures and promote school policies that encourage a professional community (Graham, 2001). Opportunities to connect informally on the grapevines can be just as powerful as more formal methods. But conscious interconnectedness with cooperating individuals is a conscious decision to take advantage of opportunities that exist in the social world (Coburn & Russell, 2008; Sisley, 1990). Conscious interconnectedness occurs if teachers are empowered and given autonomy. Ample autonomy exists when teachers are given more discretion to make decisions regarding their work (Kruse et al., 1994). This autonomy holds the educator responsible for the outcome of his/her instruction (Miller, 1993). Educators must be strong in guiding their own destiny, instead of allowing others to do the leading for them (Oberle, 1988). It is time to get involved. It is time to be part of the solution instead of a part of the problem (True, 1990). Innovative problem solving thrives when teachers are provided supportive environments where they can experiment and try new techniques and ideas (Kruse et al., 1994). Educators should continually pave ways for school improvement and 'institutional vitality', in which areas of improvement are always located and strategies are tried (Graham, 2001). The faculty must provide the environment for members to remain current in the field, challenge their own thinking, redesign courses, and join professional organizations. There needs to be ongoing renewal for a program to remain in the forefront of academia. While self-renewal is an individual challenge, the success of faculty renewal efforts is the responsibility of faculty members, administrators, and their respective institutions. Individuals who remain vital and strive for

improvement have learned not to be imprisoned by fixed habits, attitudes, and routines. Instead, the renewal promotes positive personal direction and new challenges, and a strong hunger for new knowledge (Miller, 1993).

Paramount in all these is having a mechanism to instill the vision of the school to staff so that mundane outputs are geared towards the school missions (Kruse et al., 1994). To begin with, teachers and administrators in positions of influence and power are role models for staff and students with whom they work. The leader should demonstrate self-confidence and expertise, and being an example to admire and emulate. These critical impressions that those who work with you have of you, can have a professional influence on the school's social and professional climate (Murray & Mann, 1993). This study then aims to find consensus on what factors promote the presence of a professional community and impediments to the creation of a professional community in a teacher education department (TED) at a Pacific Islands university. The two research questions were what do staff members of the TED agree to be factors that are conducive to the presence of a professional community at this Pacific Islands TED? The second question asks what factors staff members agree are to be impediments to the presence of a professional community at this TED?

Method

The Delphi Technique is used to elicit consensus on the factors that are conducive or impediments to the presence of a professional community at the TED. The Delphi Technique is a multistage process using a series of sequential questionnaires or rounds linked by feedback. Each round of the process builds on the results of the previous one and results in consensus by the final round (McManus, 1978; Maslak, 2008). The Delphi technique, developed at the Rand Corporation in the 1950s, is a widely used and accepted method for achieving convergence of opinion concerning real-world knowledge solicited from experts within a certain topic area (Hsu & Sandford, 2007). This study incorporates a three round Delphi process conducted by Gilson et al. (2009), as follows:

> Round 1: Open-ended questions were given to participants who were staff of a Teacher Education Department (TED) at an university in Fiji. An email was sent to 16 staff of the TED. Six of the sixteen staff responded. Follow up emails did not help in getting more participants. Attached on the email were the information sheet and the consent form. Signed consent forms were received from panel members who responded to the open-ended questionnaire of the first round of the Delphi process (Appendix 1). Their responses were coded identifying common characteristics from which the second questionnaire was constructed.
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> Round 2: Based on information gathered from round 1, the second questionnaire (Appendix 2) was distributed to all panel members. This time, it is a closed questionnaire. Members of this expert panel were asked individually to rate the relative importance of individual items, on

a 3-point Likert scale (1 =Not true; 2 = Somewhat true; and 3 = Very true).

Round 3: In the third and final round, questionnaires were redistributed to each individual expert, containing a summary of their score for each sub-item, along with the score for the group as a whole (Appendix 3). Final responses were returned, in which group modes for each sub-item were calculated and items ranked according to their score. Hsu and Sanford (2007) explained that the major statistics used in Delphi studies are measures of central tendency (means, median, and mode), in which the median and mode are generally the more favoured. The mode is used in this study. A mode is the most frequently occurring value. The panel's deliberation on the third round provides information for the final group consensus.

Discussion

The study aims to find consensus on factors that promote or impede the presence of professional community at a teacher education department (TED) in Fiji. In terms of factors that promote the presence of a professional community, there is consensus from the panel that the TED's lunchtime seminars have created a valuable shared space for *talanoa* (discussions), critique of issues, and sharing important developments in staff members' areas of interest. It is arguably the most successful seminar series of the university. It is organized on a fortnightly basis. Presenters provide information for preferably thirty minutes and the remaining time of the hour is spent on discussions and debates. Seminar presenters are members of the TED and guests invited from a wide array of fields that are related to teacher education, teaching and learning. For example, the Fiji Curriculum Development Unit was invited to talk on a new mathematics approach they are implementing at Fiji schools. One of the participants incorporated ideas discussed in the seminar in his class. Such regular seminars help influence staff practice, TED and university policies. A talk based on plagiarism by a TED staff, for instance, helped highlight the acuteness of the problem, from which a policy was drawn and later incorporated by the faculty, of which the department is a part. In addition, staff who attend conferences outside of the TED share what they learned when they return. Participants identify these as contributing to a professional community. Collinson and Cook (2004) emphasize that sharing knowledge, skills, and insights through collaborative exchanges helps to achieve organizational learning than individuals learning in isolation from each other. Professional isolation limits the dissemination of other colleagues' learning and knowledge. Organizational learning views people in learning institutions as part of a shared, social construction of meaning common to all members of the organization, driven by educators and administrators working together in teams devoted to the communal development of all organizational members (Kruse, 2001).

Kruse et al. (1994) agreed that opportunities for regular reflective dialogue are critical elements to the presence of a professional community. This advocates members collectively talking about specific challenges encountered and

developing a set of shared norms, beliefs and values, giving impetus for action. Effective practice requires embarking on a 'reflective odyssey' whereby there is an ongoing process of shared understandings. It requires structured, continuous, and critical reflection. Such collaborative reflection with colleagues is important as a learning opportunity and as a support mechanism. Reflective dialogue is the catalyst to reflective practices among each member, which can develop self-awareness and collective awareness of personal and shared work. Systematic, reflective dialogue allows rethinking, changing, adapting, modifying and potentially opening new interpretations of learning and teaching. Venues for dialogue allow public sharing and interrogation of beliefs and assumptions of learning and teaching (Attard & Armour, 2005; Sims, 2005) and enables 'elevated conversation' (Wallach, Gallucci, Copland, Lambert, & Lowry, 2004, p. 9) to occur, characterized by discussions on student needs, course content, and classroom changes. Reflective dialogue has the potential to maintain motivation, stir inventiveness, promote perseverance and consequently building outstanding programs around shared norms, beliefs and values (Petersen, Allen, & Minotti, 1994). In addition, it is very useful to have data-directed dialogue, in order to provide focus, support and relevance (Strahan, 2003). The TED lunchtime seminars provided an avenue for critical reflection, dialogue, rethinking, adapting, and stirring data-directed policy and practice. In fact, the name of the TED seminar series *talanga,* means purposeful dialogue in Tongan. It is vital for educational leadership to create multiple venues for professional interaction between practitioners, positively affecting efforts towards building a professional community. Information and knowledge held by individuals need to be regularly shared and discussed with others.

Team teaching in some of the TED's courses is seen by participants to the study to be conducive to building a professional community. Situations that require interdependent teaching roles are important in creating strong professional communities. The need to levy ongoing situations where teachers can work together to share practices such as team teaching, peer observations or integrated lesson designing (Kruse et al., 1994). It is hard for educators to work interdependently when they work out of sight of one another and plan, prepare lessons and materials independently (Graham, 2001). Teachers need to work together to learn about different teaching methods, teaching strategies, and valuable resources (Sisley, 1990). Educators are individuals with different personalities and styles but sharing teaching ideas will increase their competence (Murray & Mann, 1993). This will enable the de-privatization of practice, which entails inviting another practitioner to observe, share and discuss your teaching (Kruse et al., 1994). Despite team teaching by some members of staff, peer observations had been an area that has not been embraced by the TED. A few attempts were made in the past to introduce a peer observation system but it did not succeed. In a recent Board of Studies of the TED, the issue of peer observation was raised again. The Faculty Teaching and Learning Plan clearly have peer observation of teaching as a major tool to provide 'positive, supportive, non-threatening and constructive suggestions' to colleagues. This is envisaged to bring 'improved teaching from positive feedback provided by peers'. It sounds good on paper, but implementing it is a difficulty so far.

In professional communities peer observations allow teaching to come out into the open in order that teachers can learn with and from one another. However, teachers commonly guard their classrooms from each other as private and this may be one of the most counter-cultural practices that both supports and enhances professional communities in schools. This can be a reason that has held the TED from embracing peer observations of teaching, being very protective of one's teaching space. It needs to be recognized that being isolated from each other buffers mediocrity and hides high performers from those who might learn from their modeling, consultation, and coaching (Garmston & Wellman, 1998; Holland, 2002). By sharing practice 'in public', teachers learn new ways and rekindle relationships between them (Kruse et al., 1994). Furthermore, in a professional community, intrusion into ones practice is not seen as a threat, knowing that support and guidance would continually be present (Twine & Martinek, 1992). De-privatizing classrooms, if recognized, will not only improve teaching but student learning as well, by gaining constructive feedback from colleagues (Bulkley & Hicks, 2003; Nickerson & Sowder, 2002). DuFour and Eaker (1998) emphasize that schools with professional communities persistently focus on student achievement and that the language of student learning becomes the currency of daily discourse in the school. School leaders often may claim their schools as encompassing professional communities but rarely are in practice. Professional communities foster cultures in which learning by all is valued, encouraged and supported. It can also be recognized, however, that schools and institutions may be at different levels of development towards a 'mature' community (Hipp, Stoll, Bolam, Wallace, McMahon, Thomas, & Huffman, 2003).

The multiple and flexible means by which the TED delivers its courses, agreed by panelists, shows strong professional commitment to enable better student access and learning in the Pacific Islands, a region with small and scattered countries. The TED's courses are offered through face to face, print, online, hybrid, and *flexi-school* (intensive four weeks during school breaks) modes of delivery. Not many sections of the university can claim to be very innovative in its delivery of courses than the TED. Participants of the study provided consensus that, accompanied by hardworking staff members, who relentlessly ensured the continuity and vigour of teaching and learning at the TED, have ensured that this department leads in terms of student enrolments and number of courses and programs being offered. This is viewed as integral to meeting the needs of a diverse population of students in the Pacific Islands region. DuFour and Eaker (1998) emphasize that effective schools possess the drive to improve their students' learning. The word drive is pertinent here. Obviously, all schools will say that they are concerned with improving student learning outcomes. But the more effective schools are able to put this at the very heart of what they do. We could say that improved student learning is their core business in these schools. Collegiality is not fully legitimate unless it positively influences instructional practices, student learning and development. Students that would have been ignored or poorly educated were genuinely taken on board through creative, positive and challenging learning experiences (Holland, 2002; Nickerson & Sowder, 2002; Sims, 2005).

A few factors were identified as factors hindering the presence of a professional community at the TED. Participants agree that their department needs visionary and effective leaders to move the TED forward. Leadership needs to keep the school focused on shared purpose, continuous improvement and collaboration. Administrative decisions must be based on an understanding of students and faculty interests and not what administrators guessed are the needs. Strong professional communities also prosper from excellent leadership that motivates people and not merely manage them (Kruse et al., 1994; Miller, 1993). For professional communities to thrive at schools, the elementary responsibility lies largely with those charged with the direct supervision of schools. School leadership and administration is critical to the formation of professional communities by instilling philosophical coherence through collective understanding and support for the school vision, mission and goals (Holland, 2002; Leonard & Leonard, 2005; Nickerson & Sowder, 2002; Rowan, 1991). Depending on shared goals and commitment to the efforts involved, administrative support is crucial to the success of collaboration. This would mean provision of funds to facilitate research, resources, and other projects integral to the promotion of a professional community. This would provide professional development for staff and ultimately the progress of subject areas (Nancy et al., 1997). The school administration should budget for instructional needs and teacher incentives, for example, recognizing an 'outstanding teacher of the year' with an award (Miller, 1993). Teachers' efforts often go unrecognized and unacknowledged. The TED's plans require vigorous translation into action. It is worth noting also that educators may have multiple professional communities that they are engaged with such as in professional associations, teacher teams or other collegial groups. Making strong connection and interdependence among existing professional communities is important, mobilizing a high degree of commitment towards related issues (Rowan, 1991).

Participants agreed that lack of a clear Department Plan, realized in a strong vision and missions to accomplish are weaknesses. TED vision and plans may exist on paper but are not shared and do not permeate the structure and activities of the TED. The Vice Chancellor mentioned in a faculty forum that this is one of the issues that appeared on External Advisors' reports regularly (Chandra, 2010). DuFour and Eaker (1998) stress that shared norms and values must be reflected from the language and actions of members. These would provide the grains and sand that become pearls in the oyster of true community. It is not just articulated by those in leadership positions but embedded in the language and actions of those in the school (DuFour & Eaker, 1998). The rallying of a proficient and well-organized group, committed to a shared vision and values, is greater than the accomplishments of isolated individuals (Graham, 2001). It is these common purpose and values that would guide collaboration (Murray & Mann, 1993; Nancy et al., 1997). Making a conscious decision to be part of a professional community (s) and thus collaborate, work, think, problematize and celebrate together with others has transformative powers for educators. It does not mean that being part of a professional community is going to be smooth, but the benefits of having a space where your voice can be valued is crucial (Sims, 2005). Sharing common goals is a sign of a more developed and mature professional community (Wallach, Gallucci, Copland, Lambert, & Lowry, 2004).

Despite positive examples of valuable collaboration among staff such as in the publication of four books in the last two years, there is consensus in the Delphi process that certain sections of the TED still adhere to a very individualistic approach to work. This section of the TED often behaves in a manner that is not supportive of the TED as a community, such as being disinterested in most activities of the TED. It is noted that the TED's research and collaborative outputs are usually as a result of a few members' innovation. It is pertinent to note that who teachers are to one another is as important as who they are to their students. This does not mean administrators should create tasks and agendas to occupy teachers' collective energies, but refers to teachers sharing expertise and perspectives on teaching and learning processes, examining data about students, and developing a sense of mutual support and shared responsibility for effective instruction. Leaders need to realize that a collection of superstars who work in isolation cannot produce the same results as interdependent colleagues who share and develop professional practice together (Garmston & Wellman, 1998). Unfortunately, in many education settings, a picture characterized by marginalization and isolation, rather than professional collaboration and colleagueship predominate. It is therefore important that collaboration must be fostered because with positive collaboration comes respect, influence, career rewards, daily satisfactions (Graham, 2001) and can keep the organization competitive and healthy (Maguire, 1994). Moreover, schools that have the presence of professional communities are not only more effective but possess work patterns that are more cohesive and collaborative (Haycock, 2002). A collaboration, however, cannot be successful unless people involved take the time to become familiar with the collaboration (Walsh, 2002), and be selfless and concerned with how this effort can benefit the other (Nancy et al., 1997). Professional collaboration may be time consuming and may involve certain degree of conflict, but the best interest of the student is served when teachers invest the time into team decisions from the sharing of diverse perspectives (Griffin, 2001; Maguire, 1994; Walsh, 2002).

Panelists referred to lack of an effective and consistent system to support staff professional development as another impediment to a professional community. According to Leonard and Leonard (2005) the most powerful form of staff development is professional collaboration. Fredricksen (2009) further supports this notion by stressing that educators who are in effective professional communities can receive powerful learning and professional development opportunities and develop "professional capacity" (Holland, 2002, p. 314). It is the opportunity for building professional capacity that makes the development of supportive and collegial professional relationships among practitioners a useful aim to achieve. Many educators view professional development opportunities as long-term or short-term studies in higher education, attending conferences and workshops. Nevertheless, professional development activities should go beyond traditional vehicles such as teacher workshops and conferences. Schools should also embrace alternative and reform-type professional development activities such as nurturing strong professional communities and mentoring relationships. These require school leadership to treat professional development as a natural byproduct of larger organizational management strategies. School leadership should recognize that professional development is not a separate area of focus

that is usually done 'outside' of the school. Professional development opportunities can permeate organizational structures within the school through collaboration, professional dialogue and reflection through professional communities. The best staff development often occurs in the school than in workshops (Graham, 2007; King & Newman, 2001). Strong professional communities represent a powerful staff development approach and strategy for school change and sustained improvement (Cranston, 2009) and important source of new knowledge and psychological support, providing certainty in their efforts (Byrd, 1996).

Panelists in the Delphi process also recognize that as a group, the TED needs to improve on scholarship and research outputs. Many institutions today highly regard individuals who can teach and research not only in their specialty area but also in sub-areas. Someone who is up-to-date with trends in his/her subject knowledge and related areas (Woods & Karp, 1997). There has to be institutional support for staff members, but the practitioner must be responsible for his/her development as a professional. This entails viewing oneself as a lifelong learner committed to broadening professional knowledge and skills, and helping others to do the same (Graham, 2001; Miller, 1993). A professional community must be based on effective teaching and continuous updating of knowledge and skills (Kruse et al., 1994). The issue of educational research outputs is important as it is increasingly coming under attack. There is concern in the United Kingdom and the United States on the general health and credibility of the educational research community (Evans, 2002). Educational researchers therefore really need to build their credibility by looking inwards and reflect on exactly how educational research culture needs to make improvements in rigour and impact (Evans, 2002; Kennedy, 1997; Phelan, 2000). If not, then funding agents and governments will reduce educational researchers to the bottom list of research budgets. In the United States in 1998, for example, of the US$300 billion education budget, only 0.01 per cent was for educational research (Burkhardt & Schoen, 2003, p.12), depicting that educational researchers would need to do more to attract both credibility and funding.

At the TED being studied, funds allocated for educational research by the university are quite often retrieved by the finance office or given to other Schools and Institutes to utilize. Staff members of the TED are simply not submitting proposals. A message from the faculty representative to the University Research Committee states (R. Early, personal communication, 15 October, 2008) that:

> It appears that we [Educational Researchers] have been successful in our request for the reinstatement of some research funds which had been taken back by the Finance Office, due to inactivity for quite some time. This has been a wake-up call for all of us to be active in making use of any research project funds which we have previously requested and been allocated. From now on, all research projects should have clear end dates specified, and there is an expectation that the dates will be adhered to (Early, 2008).

There are three clear issues from this quotation. First, educational researchers have not been vigorously exploiting their allocated research funds. The second concern is that, research funds when successfully received by staff applicants, are often not expended on time or not accounted for at all. Consequently, the research committee desire stricter adherence to research timelines. The third message encourages staff of the TED to be more active in research. Demonstrating that these are serious matters is that the university budget for research is already very low overall, but educational researchers did not use their share fully for 2006 and other years. Specifically, money allocated for research at the university is quite small compared to other universities, at just 1 per cent of recurrent funding (USP, 2004). It is critical therefore that TED staff members need to demonstrate capability, rigour and commitment to make use of research funds and importantly, increase the publication productivity of the department. Dorovolomo (2010) in a study of a Pacific Islands journal in education from its inception in 1978 to the 2005 issues found that only 27 per cent of the published papers are empirical articles, while 73 per cent of the publications are opinion or essay papers. This indicates the lack of empirical, disciplined inquiry into educational issues. Opinion papers play a role in drawing attention to certain issues of concern, but if overdone can lead to misleading assumptions. This further stresses the importance of Pacific Island educational researchers conducting and publishing empirical studies.

Dorovolomo (2010) also found that 59 per cent of authors to the Pacific Islands educational journal are non-Pacific Islanders, while 41 per cent of authors to the journal are Pacific Islanders. This indicates that non Pacific Islanders, usually from Australia, New Zealand, Canada, and the United States, write and publish about the Pacific Islands, more than Pacific Islanders do about themselves. This is also an indication that Pacific Island educational researchers need to be more vibrant than at the moment. Research on Pacific Island educational issues should never be the sole province of Pacific Islanders, and others outside the Pacific Islands region can vigorously participate, but Pacific Island educational researchers have to demonstrate higher publication outputs than currently demonstrated. Taufe'ulungaki (2001), a Tongan scholar, acknowledges that this is the case when she mentions that most of the writing and research on the Pacific Islands is carried out by outsiders who often interpret and argue findings through their own cultural lenses. Pacific Island educational researchers should engage in more empirically based and disciplined inquiry and publications. The aim would be to increase the educational publication productivity of the region. Dorovolomo (2010) also further highlights a telling finding that 76 per cent of the authors to this Pacific Islands education journal are single authors, and only 24 per cent of the authors are involved in multi-authorship. There may be nothing wrong with a predominance of single authors, but today there is an increasing trend of multi-authorship (Aggarwal, Sschirm, & Zhao, 2007; Cruz, Cannella-Mallone, Edrisinha, Sigafoos, Robinson, & Son, 2006). In Australia, for example, 90 per cent of research publications by Australian scientists have more than one author (Barlow, 2006). Or in the area of social work, there is an increasingly higher rate of multi-authorship compared to the single author (Green & Baskind, 2007). Educational researchers in the Pacific

Islands should seek to collaborate with others in research, within and outside the region, to bolster publication productivity and educational research impact.

Deliberate collaboration is, in fact, important because collaboration and particularly international collaboration is related to significantly higher publication productivity and impact. Smeby and Try (2005) in their study in Norway found that international collaboration has a greater impact on the number of articles published compared to domestic collaboration. The scientific community may see international collaboration as a more attractive partnership. Since internationally co-authored articles are cited more than single-country papers, international collaboration may therefore be an indicator of quality. Moreover, international collaboration was a reason suggested for the recent increase and impact of Estonian research outputs. In a study comparing Estonia with other former Communist bloc countries over 11 years from 1997 to 2007, it was found that papers published by Estonian scientists had the highest impact in comparison to Hungary (7.83), Latvia (5.92), Lithuania (4.95), and Russia (3.98). Estonia's research productivity still lags behind world leading research and development (R&D) countries, but for a country of about 1, 500 actively publishing authors this was remarkable. A reason attributable to this was Estonia's diligence in co-authorship with colleagues from countries who are ahead in research intensity and impact than them. They do this more with Sweden, Finland, Germany, and the United States (Allik, 2008). It is therefore imperative that Pacific Island educational researchers are not isolated researchers but consciously collaborate with others to conduct research activities to enable what Smeby et al. (2005) call 'intellectual synergy' to occur.

In teacher education, knowledge and skills practiced out of context are not usually used in context (Rink, 1997). When pre-service teachers are better prepared, they are more likely to stay in the profession (Butler, 2002). Thus, expanding one's knowledge is important not only for the individual but also for the improvement of teacher education (Daniel, 2005). Browne and Minnick (2005), however, stress that professional communities should not just focus on knowledge development but also devote extensive energy on intellectual processes such as critical thinking and moral reasoning. Browne and Minnick are disappointed that professional communities are not devoting enough time to these two processes, critical to successful university experiences. If we want teachers of tomorrow to be learning-professionals who value lifelong learning, research into personal practice must be paramount. It is important for pre-service and in-service teachers to realize that their practices and thoughts are imperative, creating new meaning, enhancing the lives of children in their specialties, and transforming educational practice (Attard & Armour, 2005; Templin, 1992; Williamson, 1992). Educators need each other and need what the other knows. It is especially imperative that teachers are part of professional communities in the current educational environment, in which pressures on teachers are more than ever and that teacher autonomy and intelligence are often marginalized (Avila, 2009).

Another issue that reached consensus from the Delphi process is the need for leadership to be more aware of and offer respect and provide support for different areas of staff expertise at the TED. It is felt that staff expertise should be deliberately marshaled towards advancing the department and faculty fully. Kruse et al. (1994) explain that in a professional community trust and respect is

displayed when teachers feel honoured for their expertise among colleagues, the parent community and other significant groups. A professional community is enhanced when teachers are treated as professionals and not as people with mere occupations as educators (Nickerson & Sowder, 2002; Sutliff et al., 1999). Teachers need to be recognized for their achievements and contributions (Nancy et al., 1997). Those involved in the school partnership should demonstrate a heightened awareness of trust, loyalty and commitment involved in enduring professional communities (Cousens et al., 2006; Holland, 2002). Mutual respect is core to positive relationships. It is imperative to show genuine regard for those whom one works with. There is ease in sharing information about yourself and your professional interests (Sisley, 1990). As in all interpersonal relations, learning to control emotions and avoiding negative role modeling are vital (Murray & Mann, 1993). Trust and respect should not only apply to staff relationships, but also to parents and students, where trust, commitment, open communication, and caring for each other exists (Maguire, 1994).

Heavy teaching workloads were seen to be impediments to allowing TED staff to be engaged in other useful activities, interact with colleagues, and this often brings isolation. Such isolation inexorably stifles peer colleagueship and collaboration, keeps quality low, suppresses innovation, cut off democratic decision making and positive social relations, and drastically hampers the professional growth of even the most conscientious and dedicated teacher (Hargreaves, 1997; McLaughlin, 1997). This can then result in what Hargreaves (1994) refers to as a 'balkanized' culture of work, in which staff and divisions are insulated from each other, in their 'cubby-hole' cultures, thus weakening the existence of a professional community. The lack of organized social gatherings for the TED staff to unwind and interact in a stress free atmosphere further aggravates isolation. It is noteworthy that social intercourse through the 'grapevine', via informal interaction and communication, are useful means to build professional communities (Hoy & Miskell, 1991). A major complaint of teachers for not being involved in professional collaboration is insufficient time (Lujan & Day, 2010), therefore, a high teaching workload echoed by the TED staff, may further suppress the amount of time available for professional collaboration. Nevertheless, in the twenty-first century, in which educators are expected to be part of collaborative professional cultures, it may be important to view workload in a different manner. Boulton-Lewis (2011) states that it is problematic when educators see research, teaching, professional collaboration and community outreach as peripheral to an academic's workload, as they are a portion of what constitutes a teacher educator's workload. It is viewing research as being outside of one's workload that contributes to lower research outputs. In the same token, it is viewing time for professional collaboration as being peripheral to one's workload that stifles the opportunity to do so. Thus, time needs to be built into the school day and academic year specifically for collaboration. Therefore, it is for the benefit of teacher education that professional communities permeate its structures. Not only should there be a policy that encourages a professional community, but also professional communities play a vital role in policy implementation. Practitioners in strong professional communities are more likely to make changes in their instructional practice and also are likely to take risks as a result of the necessary trust they receive from

being part of a professional community (Coburn & Russell, 2008). Furthermore, the elements of a professional community discussed already are closely intertwined and often reinforce each (Bulkley & Hicks, 2003).

Conclusion

There is an ongoing need to improve the quality of teacher education. Building a strong professional community represents a viable alternative to ensuring there is quality in teacher education and in turn, quality k-12 teaching. The TED to start with, needs to be clearly positioned by having a living vision and lived educational missions to accomplish. The mention of quality here does not mean an abstract exercise of reporting measures of achievement to a faraway work supervisor, but lived experiences at the TED translated into shared purposes, strategies, student focus and collaboration. At the heart of facilitating a professional community, a strong sense of direction should emanate from the TED leadership. Participants agreed that there is often bureaucratic control. Organizing teacher educators' work via bureaucratic means profess itself, for example, in externally imposed commitments and excessive focus on rule following. What is required is a new form of social organization that cultivates collaboration and shared purpose that can be promoted and developed through professional communities. This will help in reducing isolation by taking staff out of their 'cubby holes'. A reason cited by participants to the study that causes isolation is the heavy workloads at the TED. Imperative to curbing this is the formal scheduling and reinforcement of formal time for individuals, departments and the entire faculty to engage in self-examination, reflection and collaborative research. The TED's regular lunchtime seminars provided a venue for both organizational learning as well as fostering professional community. Informal, but deliberately organized, social TED gatherings can also pave the way for fruitful social intercourse and strengths a professional community. What needs to be deliberate is the systematic marshaling of TED staff expertise to the advancement of the organization. Ultimately, when the professionalism of teacher educators increases, our own professional self-esteem will increase and the recognition and appreciation it deserves follow. This, in turn, has a chance of interacting positively with improved student learning outcomes

References

Aggarwal, R., Schirm, D. & Zhao, X. (2007). Role models in finance: lessons from life cycle productivity of profile scholars. *Review of Quantitative Finance and Accounting, 28*(1), 79-100.

Allik, J. (2008). Quality of Estonian science estimated through bibliometric indicators (1997-2007). *Scientometrics, 57*(4), 255-264.

Attard, K. & Armour, K. M. (2005). Learning to become a learning professional: reflections on one year of teaching. *European Journal of Teacher Education, 28*(2), 195-207.

Avila, J. (2009). Teachers in professional communities: improving teaching and learning. *Language Arts, 86*(4), 311-313.

Barlow, T. (2006, April 15). Hail, the clever country. *Weekend Australian,* p. 20-24.

Boulton-Lewis, G. (2011, February). *Aligning the recommendations to the University priority areas and prepare appropriate response to improve the learning and teaching process.* Paper presented at the School of Education Retreat, Naviti Resort, Coral Coast, Fiji.

Browne, M. M. & Minnick, K. J. (2005). The unnecessary tension between learning communities and intellectual communities and intellectual growth. *College Student Journal, 39*(4), 775-783.

Bulkley, K. & Hicks, J. (2003). Educational management organisations and development of professional community in charter schools (Occasional paper no. 69). National Center for the Study of Privatization in Education: Columbia University.

Burkhardt, H. & Schoenfeld, A. (2003). Improving educational research: Toward a more useful, more influential, and a better-funded enterprise. *Educational Researcher, 32*(2), 3-14.

Butler, L. L. (2002). Are we creating a dilemma by the conflict between higher preprofessional standards and projected personal shortages in HPERD fields? *Journal of Physical Education, Recreation & Dance,73*(1),17.

Byrd, A. L. (1996). Professional communities: teachers supporting teachers. *The Mathematics Teacher, 89*(4), 321-326.

Chandra, R. (2010, June 3). The Faculty of Arts and Law Assembly, Laucala Campus, University of the South Pacific, Suva, Fiji.

Coburn, C. E. & Russell, J. L. (2008). District policy and teachers' social networks. *Educational Evaluation and Policy Analysis, 30*(3), 203-239.

Collinson, V. & Cook, T. F. (2004). Learning to share, sharing to learn: fostering organisational learning through teachers' dissemination of knowledge. *Journal of Educational Administration, 42*(3), 312-332.

Cousens, L.; Barnes, M.; Stevens, J.; Mallen, C. & Bradish, C. (2006). Who's your partner? Who's your ally? Exploring the characteristics of public, private, and voluntary recreation linkages. *Journal of Park and Recreation Administration, 24*(1), 32-55.

Cranston, J. (2009). Holding the reins of the professional learning community: eight themes from research on principals' perceptions of professional learning communities. *Canadian Journal of Educational Administration and Policy, 90,* 1-22.

Cruz, B. D. L., Cannella-Malone, H. I., Edrisinha, C., Sigafoos, J., Robinson, D. & Son, S. (2006). Author productivity and publication trends in Autism-Specific journals from 1997 to 2004. *Developmental Disabilities, 21*(4), 245-250.

Cusimano, B. E. (1990). Training teachers – A cooperative effort. *Journal of Physical Education, Recreation & Dance, 61*(3), 81-84.

Daniel, L. (2005). Perspectives: Learning is a life-long expedition. *Parks & Recreation, 40*(9), 2.

Dorovolomo, J. (2010). Characteristics of authorship and papers to an education journal in the Pacific Islands: Pacific Islands Educational Journal. *The International Journal of Knowledge, Culture, & Change Management, 10*(3), 159-168.

DuFour, R. & Eaker, R. (1998). Professional Learning Communities at Work: Best Practices for enhancing student achievement. National Educational Service, Bloomington, IN.

Evans, L. (2002). *Reflective Practice in Educational Research.* London: Continuum.

Farrell, L. & Holkner, B. (2002, December). *Knowledge is something we do: Knowing and learning in globally networked communities*. Paper presented at the Annual Conference of the Australian Association for Research in Education, Brisbane, Australia.

Fink, D. & Stoll, L. (1997). Weaving school and teacher development together, In *Beyond Educational Reform – Bring Teachers Back In,* A. Hargreaves & R. Evans, Open University Press, Buckingham.

Fredricksen, J. E. (2009). Talking about teaching: establishing trust amidst uncertainty. *Voices From the Middle, 16*(4), 38-41.

Garmston, R. & Wellman, B. (1998). The adaptive school: Teacher talk that makes a difference. *Educational Leadership, 55*, (7), 30-34.

Gilson, G., Brown, W.J., Faulkner, G., McKenna, J., Murphy, M., Pringle, A., Proper, K., Puig-Ribera, A. & Stathi, A. (2009). The international universities walking project: Development of a framework for workplace for workplace intervention using the Delphi technique. *Journal of Physical Activity and Health, 6*(4), 520-528.

Graham, K. C. (2001). Promoting collegial relationships between physical educators and other faculty. *Journal of Physical Education, Recreation & Dance, 72*(5), 52-53.

Graham, P. (2007). Improving teacher effectiveness through structured collaboration: a case study of a professional learning community. *RMLE Online, 31*(1), 1-17.

Green, R. G. & Baskind, F. R. (2007). The second decade of the faculty publication project: journal article publications and the importance of faculty scholarship. *Journal of Social Work, 43*(2), 281-295.

Griffin, L. M. (2001). Increasing collaboration in elementary methods courses. *Journal of Physical Education, Recreation & Dance, 72*(8),17-18.

Hargreaves, A. (1997). From reform to renewal: A new deal for a new age, In *Beyond Educational Reform – Bring Teachers Back In,* A. Hargreaves & R. Evans (eds), Open University Press, Buckingham, pp. 108-120.

Hargreaves, A. (1994). Changing work cultures of teaching, in *The Workplace in Education: Australian Perspective.* F. Crowther & B. Caldwell (Eds). Edward Arnold: Sydney. Pp. 39-51.

Haycock, K. (2002). Building collaborative learning communities. *Teacher Librarian, 29*(4), 35.

Hipp, K. K., Stoll, L., Bolam, R., Wallace, M., McMahon, A., Thomas, S. & Huffman, J. B. (2003). *An international perspective on the development of learning communities.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Holland, N. E. (2002). *Small schools making big changes: The importance of professional communities in school reform*. Proceedings of the Annual Meeting of the National Association of African American Studies, 11-16 February, Houston, TX.

Hoy, W. & Miskell, G. (1991). *Educational administration.* McGraw Hill, USA.

Hsu, C. & Sandford, B.A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research & Evaluation, 12*(10), 1-8.

Kennedy, M. (1997). The connection between research and practice. *Educational Researcher, 26*(7), 4-12.

King, M. B. & Newman, F. M. (2001). Building school capacity through professional development: conceptual and empirical considerations. *The International Journal of Educational Management, 15*(2), 86-93.

Kruse, S. D. (2001). Creating communities of reform: continuous improvement planning teams. *Journal of Educational Administration, 39*(4), 359-383.

Kruse, S.; Louis, K. S. & Bryk, A. (1994). Building professional community in schools, In *Issues in Restructuring Schools, 6*, 3-6.

Leonard, L.J. & Leonard, P.E. (2005). Achieving professional community in schools: The administrator challenge. *Planning and Changing, 17*(2), 23-40.

Lujan, N. & Day, B. (2010). Professional learning communities: overcoming the roadblocks. *Delta Kappa Gamma Bulletin, 76*(2), 10-17.

Maguire, P. (1994). Developing successful collaborative relationships. *Journal of Physical Education, Recreation & Dance, 65*(1), 32-44.

Maslak, M.A. (2008). School as a site of Tibetan ethnic identity construction in India? Results from a content analysis of textbooks and Delphi study of teachers' perceptions. *Educational Review, 60*(1), 85-106.

McLaughlin, M. W. (1997). Rebuilding teacher professionalism in the United States, in *Beyond Educational Reform – Bringing Teachers Back In,* A. Hargreaves & R. Evans (Eds), Open University Press, Buckingham, pp. 80-88.

McManus, B. (1978). Cooperative planning for organisational improvement using a modified delphic probe. *Administrators Bulletin, 9*(1), 1-4.

Miller, G. A. (1993). Faculty renewal in basic instruction programs. *Journal of Physical Education, Recreation & Dance, 64*(6), 45-59.

Mittelmark, M. B. (2008). Health promotion: a professional community for social justice. *Promotion & Education, 15*(2), 3-12.

Murray, M. & Mann, B. (1993). Is our professionalism showing or slipping? *Journal of Physical Education, Recreation & Dance, 64*(7), 30-35.

Nancy, K.; Kathy, L.; Michael, N.; Jeane, R. & Deborah, T. (1997). What we have learned through collaboration: A summary report from a national teacher education conference. *Physical Educator,54*(4),170-181.

Newman, F. (1996). *Authentic achievement: Restructuring schools for Intellectual Quality*. Jossey Bass, San Francisco.

Nickerson, S. D. & Sowder, J. T. (2002). *What factors influence the formation of teachers' professional communities and why should we care?* Proceedings of the Annual Meeting of the International Group for the Psychology of Mathematics Education, July 21-26, Norwich, England.

Oberle, G. H. (1988). A future direction plan for our professions. *Journal of Physical Education, Recreation & Dance, 59*(1), 76-77.

Petersen, S. C.; Allen, V. L. & Minotti, V. L. (1994). Teacher knowledge and reflection. *Journal of Physical Education, Recreation & Dance, 65*(7), 31-37.

Phelan, T. J. (2000). Is Australian educational research worthwhile? *Australian Journal of Education, 44*(2), 175-194.

Rink, J. E. (1997). Teacher education programs: The role of context in learning how to teach. *Journal of Physical Education, Recreation & Dance, 68*(1), 17-24.

Rowan, B. (1991, April). *The shape of professional communities in schools*. Paper presented at the Annual Meeting of the American Research Association, Washington DC, USA.

Smeby, J. & Try, S. (2005). Departmental contexts and faculty research activity in Norway. *Research in Higher Education, 46*(6), 593-619.

Sims, M. J. (2005). The power of community and conversation. *English Journal, 94*(3), 89-93.

Sisley, B. L. (1990). A time to network – How to assist yourself and others. *Journal of Physical Education, Recreation & Dance, 61*(3), 61-64.

Strahan, D. (2003). Promoting a collaborative professional culture in three elementary schools that have beaten the odds. *The Elementary School Journal, 104*(2), 127-146.

Sutliff, M; Brown, A. & Elliot, M. (1999). Developing educational leaders in physical education and health education. *Physical Educator, 56*(2), 58-66.

Taufe'ulungaki, A. (2001). The role of research: a personal perspective. *Directions: Journal of Educational Studies, 23*(2), 3-13.

Templin, T. J. (1992). Research for and by practitioners. *Journal of physical education, Recreation & Dance, 63*(9), 11 & 16.

True, S. S. (1990). A time to become involved – Be part of the solution. *Journal of Physical Education, Recreation & Dance, 61*(3), 48-49.

Twine, J. & Martinek, T. J. (1992). Teachers as researchers – An application of a collaborative action research model. *Journal of Physical Education, Recreation & Dance, 63*(9), 22-25.

USP (2004). *USP research strategy 2005-2007*. Suva, Fiji: USP.

Wallach, C. A., Gallucci, C., Copland, M., Lambert, M. B. & Lowry, L. K. (2004). Elevating the Conversation: building professional community in small high schools. Washington State, USA: Small Schools Project.

Walsh, D. S. (2002). Emerging strategies in the search for effective university-community collaborations. *Journal of Physical Education, Recreation & Dance, 73*(1), 50-53.

Williamson, K. M. (1992). Relevance or rigor – A case for teacher as researcher. *Journal of physical education, recreation & Dance*, *63*(9), 17-25.

Woods, M. L. & Karp, G. G. (1997). Are you ready for today's higher education positions? *Journal of Physical Education, Recreation & Dance, 68*(7), 46-50.

Conclusion: Collective Conversations to Improve Educational Policy and Practice

Jeremy Dorovolomo

Contributors, or bricoleurs, have made purposeful discussions, conversations, debates and offered perspectives on various educational issues in Fiji and the Pacific Islands. In the spirit of a bricolage, this book has discussed a repertoire of educational thoughts about Fiji and the Pacific Islands that may be useful in making a point, providing a solution somewhere, or giving impetus for change in an area of education at school and higher education. In reality, one can never predict what is likely to happen in a classroom, the values that underpin schools and schooling, the intricacies of curriculum practices, the dynamics of what occurs during school recess and after school, the interplay of the cultures of students and pedagogy, and the level of professional communities in schools and higher education. Thus, this book provided readers with an array of conversations to help produce new ways of thinking about issues affecting schools in Fiji and the Pacific Islands that would eventually influence student learning.

As this epilogue is being written, the author received an email from a cousin who works for UNICEF Solomon Islands, who commented that they are focusing on improved literacy and numeracy in the early grades, as the country has perhaps the lowest in the Pacific region. As such, they would focus funds in the Solomon Islands on Early Child Education and primary schooling to grade 4 (A. Likaveke, personal communication, January 6, 2014). In this book, Pam Bidwell has also highlighted that school libraries are enormously important factors in improved literacy. Undoubtedly, quality school library programs improve students' academic performance and promote higher reading abilities of students through access to books and free reading. However, in many schools, staff and administrators do not view and value the library as a place of learning. Therefore, it is imperative for stakeholders to see that libraries have the potential to empower students (Scott & Plourde, 2007). In fact, sustained funding into libraries by the government over time is salient in making a difference (Rosenfeld & Loertscher, 2006). Schools that have improved library services including extended opening hours and increased access by students reported a greater degree of collaboration

on students' reading, than schools that did not put targeted funds into their libraries (Rosenfeld & Loertscher, 2006).

Students benefit from substantial opportunities to actually read, be immersed in a variety of text, and have easy access to a balanced library. Time spent reading is a very valuable predictor to reading achievement, comprehension and vocabulary. Moreover, independent reading time is crucial to literacy efforts and the school library can provide a space for pupils to read at their own comfortable pace. Libraries are where we bank wealth that can provide meaningful reading contexts for learning for students (Sanacore & Palumbo, 2010). In contexts where many students come from lower socio-economic status and books may not be readily available at home, school libraries provide them with access to reading books at school and to borrow and take home (Constantino, 2008; Sanacore & Palumbo, 2010). In the Pacific Islands, books may not be readily available at many homes, making a good school library critical to literacy efforts. This should be the case as Constantino (2008) argues that there are often talks of the 'literacy crises' without talking about books and the lack of access to books. The school library is critical to the reading ability of students. However, Constantino found that students want the library to be a fun place that has good books that interest them, have comfortable sitting areas, being allowed to talk, and have it open during lunch, before and after school. Besides other strategies of increasing literacy rates in the Pacific Islands, the much neglected school library needs to be given reasonable attention.

Ample attention too needs to be directed to grossly neglected areas in the Fiji and Pacific Islands school curriculum such as the arts. Cresantia F. Koya-Vakauta highlighted the need to give art education greater significance than it is at the moment in Fiji and Pacific Islands' curricula. It is important for policy makers and administrators to see the unique and salient perspectives such subjects as the arts bring into the curriculum, children's school experiences and lives. Art education itself is a vital mode of seeing, imagining, inventing, and thinking. In today's world multiple literacy are important but we neglect various literacy areas such as the arts. Sandell (2009) emphasizes that visual literacy is paramount, and despite a world that is highly visual, for many, the arts is a mystery. Thus, in developing visually literate citizens, Pacific Islands' governments would need to convert policies agreed to regionally into practice and ensure that arts teachers adequately populate schools.

Teacher education policies, in fact, should not attempt to achieve change through prescription and standardization, but rather develop expertise, scholarship, collegiality, and creativity. It is vital not to oversimplify teaching and teacher education as qualities and skills, and ending up being very craft-based and technical, to the omission of the socio-cultural contexts of the students in many instances (Griffiths, 2013). Kelesi Whippy, Gillian Boulton-Lewis, Jeremy Dorovolomo, Jack Maebuta, and Konai Thaman all emphasized how instrumental understanding the socio-cultural environment of Pacific Islands students in order to better meet their learning needs. The cultural assumptions of the teacher can often collide with the assumptions of the student, which can result in an impaired teaching and learning environment. Thaman (1996) has been strongly advocating cultural sensitivity in Pacific Islands' higher education and schools, and that it is important for educators to understand their students. Thaman explains, for

example, that students may not openly disagree in class as this may be seen as disrespect for authority. Vlaardingerbroek (1996) explains the transitional Pacific cultures, as globalization and modernization continually carves Pacific cultures. Educators would still need to understand the contexts of the transitional Pacific cultures even though it may not be the pre-contact cultures and contexts.

In the Pacific Islands context, many schools and particularly rural ones, practice multi-class or multi-grade teaching. Govinda Lingam highlighted this issue and if teacher education in the Pacific Islands can pay more attention than they do at the moment to prepare students for such teaching situations. Since multi-class and multi-grade teaching have their own demands and challenges it is imperative that prospective teachers are prepared sufficiently. Lingam (2001) used the metaphor that multilevel teaching can be likened to playing two games of table tennis on the same table. It can be confusing and a challenge which require teacher preparation. In the Pacific Islands, as in many other countries, teachers often have to contend with children of multiple ages and abilities in multi-class situations. In another of Govinda Lingam's chapter, he argued the salience of the *being* in the curriculum, putting significance on the development of emotions, morals and spirit in the formal curriculum. Adu-Febiri (2011) reinforces that positivist models of the curriculum commonly exclude emotions, morals and spirit in the classroom. Adu-Febiri further explains that the basis of social order is a framework that incorporates emotions (intense group feelings), morality (passion to improve human society through social change), and spirituality (shared beliefs that may or may not be related to conventional religion).

Jeremy Dorovolomo argues in his chapter that in order to achieve sustained and substantive improvement in teacher education, an important strategy is to develop staff to function in a professional community. Teacher education leaders need to ensure that they do not engage their staff in superficial activities that have little effect on improved student and staff learning and outputs. Too often teacher education leaders spend energy on 'cosmetic' issues and are managing people more than leading them. It is imperative that staff members share the same vision and missions of the institution or academic department. Educational policies quite often exist only on paper, as leaders do not know how to translate policies into action. Leaders need to ensure that educational policies are translated into action and permeate school structures. Importantly, knowing how to create a context supportive of change in order that policies entrench the school structure is vital. It is not about mere compliance but true commitment to shared purposes. It is about providing an environment in which staff members are not afraid to disagree and where there is mutual and professional dialogue. This cannot happen if educators practice in isolation from each other and lack collective responsibility. There is need to embrace collective responsibility in research, information sharing, teaching and professional development. All these, it must be remembered, should be geared towards improved and high quality learning for student teachers who have a responsibility in influencing the young people of today and whose future is increasingly uncertain. Students benefit if educators form into functional professional communities. High quality professional practice at teacher education directly impacts upon teachers in schools. Professional communities not only in teacher education, but also at the K-12 school levels, can be deliberately fostered.

School leaders then have a special role in ensuring that visions are set, shared, and resourced to build a culture of continuous improvement and renewal.

In the book, Jeremy Dorovolomo purported that the pupil's environment goes further than simply the classroom and emphasized that there is increasingly a lack of recognition of the educational value of such environments as recess and break times, including the importance of providing opportunity for students to be physically active through their own play. There is an increase in the length of the school day but on the other hand, there is often a reduction in recess and break times reflecting an underestimation of the benefits of recess (Blatchford & Sumpner, 1998). The obligatory recess breaks are significant spaces for children to be physically active and play in their own terms, especially if an active physical education program is not in place and time spent after school is increasingly focused on less active participation (Evans, 2003). In fact, the amount of physical activity by children who are active during recess is often more than what they get from their formal physical education lesson (Zygmunt-Fillwalk & Bilello, 2005). The school physical education curriculum, school sports, and recess play do have a nexus. A positive environment in one area can often predict a positive outlook in the other. There is connection between school physical education, sports and recess as well as what happens after school (Teri, 1996). For example, when children do not have the opportunity to be involved in active play, both after school and during school, it impedes their development of joyful self-discovery (Teri, 1996). When students do not receive ample opportunity to be active in a physical education class, recess, and after school it then affects their chances of sufficient physical activity.

People often may think that teacher education does not have anything to do with recess. However, according to O'Brien (2003) "teacher education programs could use recess as the perfect time and place to observe children's social behavior and ability to get along with others" (p. 163). In order for teacher education to see recess as important for prospective teachers, it needs to see recess as an achievement context rather than as an empty space. Teacher education institutions and schools need to view recess and recess play and games as integral elements to a child's day. Baker (2012) stresses that there is much research conducted around children and physical activity, but whether they 'listen' to children's voices is a question. The recess is an appropriate space to observe and listen to what children prefer to do for physical activity. Clearly, children would like to be active and participate in fun activities within programs that are organized through the eyes of students (Baker, 2012). Children's health does not involve only opportunities to be physically active but includes a healthy nutrition. Jimaima Schultz explored the importance of policy and practice in the shaping of children and women's health. At the school level, the Fiji National Food and Nutrition Centre have intervened creating a canteen guideline for use in schools throughout the country. One of the guidelines is that schools should not sell junk food and fizzy drinks. The Fiji Ministry of Education had also launched a package called 'Education in Health is Wealth' in schools. It included health issues including the importance of engaging in regular physical activity and eating correctly (Gounder, 2006).

References

Adu-Febiri, F. (2011). Inviting emotions, morals and spirit into our classrooms: A sociological perspective on the human factor model of education. *Review of Human Factor Studies, 17*(1), 40-89.

Baker, K. (2012). Fun is # 1. *Physical and Health Education Journal, 78*(2), 42-43.

Blatchford, P. & Sumpner, C. (1998). What do we know about breaktime? Results from a national survey of breaktime and lunchtime in primary and secondary schools. *British Educational Research Journal, 24*(1), 79-95.

Constantino, R. (2008). It's not rocket science; students know what is good for them: The efficacy of what is quality school library. *Knowledge Quest, 36*(4), 61-63.

Glover, T. D., Parry, D. C. & Shinew, K. J. (2005). Building relationships, accessing resources: Mobilizing social capital in community garden contexts. *Journal of Leisure Research, 37*(4), 450-474.

Gounder, S. (2006, March 31) Ministry warns of lifestyle diseases. *The Fiji Times*, p. 18.

Griffiths, M. (2013). Critically adaptive pedagogical relations: The relevance for educational policy and practice. *Educational Theory, 63*(3), 221-236.

Lingam, G. I. (2001). Multi-class teaching: Implications for teacher preparation. *Pacific Curriculum Network.* 10(1), 22-26.

O'Brien, L. M. (2003). The rewards and restrictions of recess. *Childhood Education, 79*(3), 161-166.

Rosenfeld, E. & Loertscher, D. (2006). Improving literacy through school libraries: Evaluation report. *Teacher Librarian, 33*(4), 6-8.

Sanacore, J. & Palumbo, A. (2010). Middle school students need more opportunities to read across the curriculum. *The Clearing House, 83*(5), 180-185.

Sandell, R. (2009). Using form+theme+context (FTC) for rebalancing 21st century art education. *Studies in Art Education, 50*(3), 287-299.

Scott, K. J. & Plourde, L. A. (2007). School libraries and increased student achievement: What's the big idea? *Education, 127*(3), 419-429.

Teri, P. (1996, March). *Play: An important component of preventative behavior management.* Paper presented at the Annual Conference of Southern Early Childhood Association, Little Rock, Arizona, USA.

Thaman, K. H. (1996). Hints for teachers at the University of the South Pacific: (multi) cultural sensitivity. *Pacific Curriculum Network, 5*(2), 6-7.

Vlaardingerbroek, B. (1996). Pacific cognitive style and the development functions of science education. *Pacific Curriculum Network, 5*(2), 2-5.

Zygmunt-Fillwalk, E. & Bilello, T. E. (2005). Parents' victory in reclaiming recess play. *Childhood Education, 81*(1), 19-23.

A myriad of educational issues exist in Fiji and the Pacific Islands. This book is a collection of papers presented on the School of Education Seminar Series of the University of the South Pacific. It is a bricolage of discussions, conversations, and debates. *Discussions and Debates in Pacific Education* is designed to illuminate various educational issues that may often be overlooked in the Pacific Islands, such as art education, the importance of recess, the value of after-school programs for students, attrition in higher education, and the critical need for improved school libraries, to name a few. The book is divided into educational issues in K–12 schools and higher education and its environment. This book will be of interest to a variety of readers, including postgraduate students, teacher educators, and policy makers.

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