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Jessica Slade

*Victoria University of Wellington, jsslade06@gmail.com*

Pak Yoong

*Victoria University of Wellington, pak.yoong@vuw.ac.nz*

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# THE TYPES OF INDIGENOUS KNOWLEDGE TO BE RETAINED FOR YOUNG NEW ZEALAND BASED SAMOANS: A SAMOAN GRANDPARENTS' PERSPECTIVE

Jessica Slade, School of Information Management, Victoria University of Wellington, Wellington, New Zealand, jsslade06@gmail.com

Pak Yoong, School of Information Management, Victoria University of Wellington, Wellington, New Zealand, pak.yoong@vuw.ac.nz

## Abstract

*As a result of mass migration from Samoa to neighbouring countries during the 1950s and 1960s, there are now more Samoans living outside of their homeland than there are within the country itself. As many Samoan migrants are getting older, there is an urgent need to transfer the wealth of indigenous knowledge that they possess to the younger generations before it is too late. This is to ensure the survival of Samoa's culture, heritage, customs, traditions and principles. This research uses semi-structured interviews with eight New Zealand based grandparents to understand the phenomena at hand. The aim of this study is to find out what types of indigenous knowledge that older NZ-based Samoans consider desirable for retention by younger NZ-born Samoans. Emergent results include the importance of Fa'aSamoa (Samoan way of life) which lies at the very core of all things Samoan, the church, respect (fa'aaloalo) for elders, the Samoan language and the importance of family.*

*Keywords: Indigenous knowledge, traditional knowledge, Samoa*

# 1 INTRODUCTION

Throughout the world, many indigenous communities are experiencing an erosion of traditional knowledge as a result of mass migration to more developed countries and the influence of westernization and modernization within their communities. The culmination of World War II saw a great surge of Samoan's migrating to New Zealand for various reasons in the 1950s and 1960s. One reason is that Samoans who served in New Zealand forces during the War returned to their homeland with stories of their experiences therefore arousing a lot of interest in migration (Macpherson, 2000). Furthermore, US Marines who were stationed in Samoa during World War II stimulated a general interest in migration amongst the Samoan population. However one of the main reasons for this rapid increase in migration from Samoa to New Zealand was the search for greater job opportunities, better living conditions and an overall improved quality of life for the family (Macpherson, 2000). New Zealand seemed like the prime location for these migrants because of its close proximity to their home country and the increase of jobs being created within its economy transforming it from that of an agricultural one to an industrial one. As a result, today there are more Samoans in New Zealand than there are in Samoa which has huge implications on the survival of its traditions and customs (Statistics New Zealand, 2006).

The first migrants to arrive in New Zealand are reaching retirement age while younger second generation Samoans are being influenced by the pressures of modernization. As a result, their interest in indigenous knowledge<sup>1</sup> is decreasing. As indigenous knowledge is often marginalized by society, there is an urgent need to share, transfer and distribute this indigenous knowledge from older generations down to younger descendants so that its culture and traditions survive and prosper. For example, if this knowledge becomes unavailable or disappears altogether, the survival of Samoan customs and traditions is at serious risk.

The majority of indigenous knowledge comes in the form of tacit knowledge making it difficult to explain and transfer to younger generations without actually allowing them to experience it themselves. This makes it hard for older Samoan generations to show and explain to younger Samoan generations how to carry out certain customs and traditions especially if they do not live in Samoa. Consequently, it is important to undertake a study that delves more deeply into the topic of Samoan indigenous knowledge and its importance to its people. This paper reports the types of indigenous knowledge that Samoan grandparents, who have moved from Samoa to New Zealand, consider to be desirable for retention by young New Zealand based second generation Samoans.

The first section of the paper presents a literature review which is then followed by an explanation of the qualitative method used in this study. The results are then presented, followed by a discussion on these results as well as recommendations for future research.

## 2 LITERATURE REVIEW

There has been much research on indigenous knowledge and the key role that it has played in the sustainable development of developing countries (Agrawal, 1995; Gorjestani, 2000; Grenier, 1998; Guchteneire, Krukkert & Liebenstein, 1999).

### 2.1 Indigenous knowledge

Indigenous knowledge (IK) is defined as a unique cumulative body of knowledge generated and evolved over time and possessed by people belonging to a particular geographic area enabling them to benefit from their natural resources (Guchteneire, Krukkert & Liebenstein, 1999; Kaniki & Mphahlele, 2002; Sen, 2005). IK is unique to that particular geographic location and is passed down from generation to

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<sup>1</sup> The term "traditional knowledge" will be used interchangeably with indigenous knowledge to mean the same thing.

generation. IK can be differentiated from Western scientific or modern knowledge in that the latter is developed and generated by research institutions, universities and private businesses (Agrawal, 1995; Kaniki & Mphahlele, 2002). Indigenous Knowledge is developed outside the formal education system, it does not necessarily operate within formal organisations and is mainly transferred by word of mouth (Guchteneire, Krukkert & Liebenstein, 1999; Kaniki & Mphahlele, 2002). For the purpose of this paper, Grenier's (1998) definition of indigenous knowledge will be used: "the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area" (p. 1).

For many centuries human beings have been generating and producing knowledge that has allowed them to survive and prosper within their social and natural environments (Guchteneire, Krukkert & Liebenstein, 1999; Mehta, Alter, Semali, & Marezki, 2013). IK is used by many cultures as the basis for their decision-making processes in relation to various issues such as food security, human and animal health, education, natural resource management and other vital economic and social activities (Gorjestani, 2000; Grenier, 1998; Mehta, Alter, Semali, & Marezki, 2013). IK is a part of everyday life for some cultures and is entrenched in people's experiences and beliefs. It can give us an insight into historic events for example, IK can help to explain the consequences of demographic effects of migration (Mehta, Alter, Semali, & Marezki, 2013).

## **2.2 Characteristics and types of indigenous knowledge**

There are various characteristics of IK that define its uniqueness. One of the main characteristics is that IK is generated within communities (Forsyth, 2013, Guchteneire, Krukkert & Liebenstein, 1999; Sen, 2005). IK is rooted within a particular community and is directly related to the experiences that are generated by the people in these communities (Sen, 2005). It is not systematically documented as it is largely oral in nature (Guchteneire, Krukkert & Liebenstein, 1999). Guchteneire, Krukkert & Liebenstein, (1999) and Sen, (2005) also state that another characteristic of IK is that it is experienced rather than theoretically learnt. It is dynamic in that it is based on practical experimentation and environmental innovation as opposed to being theoretically learnt in the formal schooling education system (Kaniki & Mphahlele, 2002). IK is also learnt through repetition which is a major contributing factor to the retention and reinforcement of a culture's customs and traditions (Sen, 2005). There is very little literature on specific types of IK however Tavana, (2002) does speak about two types of indigenous knowledge – explicit indigenous knowledge and tacit indigenous knowledge. These are discussed further below.

### *2.2.1 Explicit Indigenous Knowledge*

Explicit knowledge consists of "facts, rules, relationships and policies that can be faithfully codified in paper or electronic form and shared without need for discussion" (Wyatt, 2001, p.g. 6). Furthermore, Smith (2001) defines explicit knowledge as "academic knowledge or "know-what" that is described in formal language, print or electronic media, often based on established work processes, use people-to-documents approach" (p.g. 314). Explicit indigenous knowledge refers to traditional knowledge that is easily articulated, expressed, communicated and recorded. According to Tavana, (2002) examples of explicit Samoan IK include the names of reef fish, the breeding times of birds or the way in which to use certain plants for medicinal purposes. The nature of explicit knowledge is that it is easy to store, transfer and communicate with others. As the erosion of explicit IK and indigenous communication are increasing, the need to transfer, store and retain this knowledge amongst indigenous communities is greater now more than ever before (Mehta, Alter, Semali, & Marezki, 2013; Tikai & Kama, 2010).

### *2.2.2 Tacit Indigenous Knowledge*

In contrast to explicit knowledge, tacit knowledge refers to the "practical, action-oriented knowledge or "know-how" based on practice, acquired by personal experience, seldom expressed openly [and] often resembles intuition" (Smith, 2001, p.g. 314). Tacit knowledge is often difficult to express openly with words because it encompasses carrying out something without having to think about, like

riding a bicycle for example. The very nature of tacit knowledge is that it is difficult to extract from the heads of individuals. It is very seldom found in books, manuals, databases or files as it is developed from mental models, values, beliefs, perceptions, insights, experiences and assumptions (Smith, 2001).

Tacit indigenous knowledge refers to the types of traditional knowledge that cannot be easily expressed or articulated to outsiders (Tavana, 2002). Tacit IK is largely based on an individual's emotions, experiences, insights, observations and perceptions. Examples of Samoan tacit IK include the deep respect that Samoan people have for their elders or the process of reaching a unanimous consensus within a village fono (meeting).

### 2.2.3 *Indigenous knowledge in Samoa*

Indigenous knowledge in Samoa is largely guided by core cultural values and includes respect for the elders and the matai system (chiefly system), the importance of the collective as opposed to the individual, deep care for one another, familial ties and productivity for the wellbeing of the larger Samoan society (Efi, 2005; Keddell, 2006; Lilomaiava-Doktor, 2009; Tavana, 2002, Toso, 2011). Thornton, Kerslake and Binns (2010) highlight the utmost importance that Samoan people place on religion and spirituality. Religion is a major component of Samoa's indigenous knowledge. Samoans view themselves as stewards of their natural resources in which God granted them the responsibility to protect as their heritage (Toso, 2011). Thonton et al (2010) state that the church is one of three enduring pillars that form the basis of Samoan society with the other two being the matai (chiefly titles) and the state. A strong relationship exists between the state and the church in Samoa as shown through government leaders possessing matai titles and performing dual roles as church leaders as well (Thornton et al, 2010). As a result, the church is entrenched in the matai system and in turn, a significant aspect of Samoan indigenous knowledge. The church is therefore in a position to influence all aspects of village life within Samoa. The relationship between these three pillars is fundamental to Samoan society not only in Samoa, but also to Samoans living outside of their home country.

### 2.3 **New Zealand based Samoans today**

The Samoan population in New Zealand grew swiftly after World War II, particularly in urbanized areas where new employment opportunities were being generated (Anae, 2009; Macpherson, et al, 2000). Macpherson, et al, (2000) state that much of the growth within the Samoan-NZ population was a direct result of in-migration and internal growth. In-migration refers to new Samoan migrants joining their relatives that already resided in New Zealand. These new migrants were a mixture of visitors, short-term migrants, temporary migrants, permanent migrants and those who travelled between Samoa and New Zealand regularly (Macpherson, et al, 2000). The growth in the Samoan population in New Zealand has been directly related to internal growth.

With a large percentage of Samoans currently residing in New Zealand, there are many implications that this has on their cultural identity which can create a myriad of issues and challenges for them. The socio-cultural experiences of the migrant and first/second generation Samoan are different and are evident in the identity journey that New Zealand born Samoans face (Anae, 1998; Anae, 2009; Franklin, 2003). As New Zealand born Samoans are labelled as "Pacific Islanders" as opposed to "New Zealanders" or "Samoans", the search for a personal identity is a difficult one. At the same time, while NZ-born Samoans recognise their association with the fa'aSamoa (Samoan way of life) of their parents, their ideas of what they want to achieve and experience can often come into conflict with that of their parents. The following quote from Anae, (1998) captures the essence of this identity conflict that many NZ-born Samoans experience:

*"Pacific Islanders exist only in New Zealand: I am called a Pacific Islander when I arrive at Auckland airport. Elsewhere, I am Samoan."* (p. 128)

This highlights the identity crisis that many NZ-born Samoans face in that they are challenged to assimilate themselves into New Zealand society while at the same time maintaining their own Samoan identity, culture and traditions (Toso, 2011). Anae (1998 and 2009) speaks about the unique identity that NZ-born Samoans possess which is defined by their attributes and experiences. NZ-born Samoans are brought up in the NZ education system therefore setting them apart from their parents and family that were born in Samoa. They have access to two different life-styles and alternate between the two or embrace one while denying the other. They also experience identity confusion at not being accepted by Samoan family and/or New Zealanders and as a result adopt coping mechanisms to deal with these issues (Anae, 1998; Anae, 2009; Franklin, 2003; Keddell, 2006). This search for identity can create confusion and mixed emotions in the lives of young Samoan people. However Anae (1998) shows that some NZ-born Samoans can achieve a secure sense of identity that allows them to make knowledgeable decisions about who they are, thus actively participating in New Zealand society, their own families, church and wider community groups. It must be stated however that all NZ-born Samoans will have differing outlooks in regards to the identity crisis depending on their own past experiences.

### 3 RESEARCH METHOD

This study is concerned with gaining a better understanding of the types of Samoan indigenous knowledge that older NZ based Samoans consider to be important for retention by younger NZ based Samoans. Therefore, this study is based on the perceptions of individuals and is subjective. Accordingly, this research adopts an interpretive approach. This approach is necessary and appropriate for this research question as this topic domain is a relatively new area within academic research.

Identifying the IK from a group of Samoan grandparents is arguably a complex process, including a myriad of individual, interpersonal, and cultural components. In order to develop a rich understanding of these complexities, case research was deemed the most appropriate methodology (Eisenhardt 1989, Yin 1994). Yin (1994) defines case research as an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially where the boundaries between phenomenon and context are not clearly defined. Several methods were used to gather data which include interviewing, document analysis and participant observation (fieldwork). These methods captured the reality of the participants in great detail as their opinions and perspectives were obtained within their real-life context.

Eight grandparents were invited to take part in this exploratory study (see Table 1). They all fit the criteria of being born in Samoa and migrating to NZ during the 1950s and 1960s as well as having an in-depth knowledge of Samoan customs, traditions and culture.

Participant	A	B	C	D	E	F	G	H
Gender	Female	Female	Male	Female	Female	Female	Male	Male
Age	80	70	64	83	72	81	66	68
Year moved to New Zealand	1958	1961	1966	1959	1964	1966	1967	1969

Table 1. Demographic information on the participants

#### 3.1 Data collection and analysis

The qualitative data were gathered from a series of semi-structured interviews with the aid of a digital recorder. The audio recordings were transcribed immediately after each interview. The second step of thematic data analysis involved reading through the transcripts. This was to ensure that an overall

understanding of the information provided by the participants was achieved. In reading through the transcripts, five recurring themes began to emerge. These themes were present amongst the majority of the interviewees, if not all. The next step to this thematic analysis was to identify all the data that related to the identified themes (Aronson, 1994). A number of sub-themes emerged from this process.

The final step of analysis was integrating these themes and sub-themes. This was done through analysing both the themes and sub-themes that emerged from the thematic data analysis as well as the related literature. This allowed the researcher to draw overall conclusions from their findings and relate it back to the existing literature.

## **4 RESULTS**

Throughout this study, it was evident that the participants largely agreed on the types of indigenous knowledge they desired to be retained for younger Samoan generations. The following types of indigenous knowledge were identified from the data.

### **4.1 Fa'aSamoa in New Zealand**

Fa'aSamoa is an extremely important part of Samoan life and lies at the very core of all things Samoan. It translates to mean the "Samoan way" or the "Samoan way of life" and is an all-encompassing concept that dictates the way in which Samoans should behave. It describes the socio-political and cultural way of life for the people of Samoa (Anae, 2009; Efi, 2004).

Fa'aSamoa is something that all eight grandparents want their grandchildren to retain whilst growing up in New Zealand. The grandparents do, however, acknowledge that fa'aSamoa in New Zealand is different to fa'aSamoa in Samoa. Not every Samoan has the same understanding of the concept of fa'aSamoa (Anae, 2009). In New Zealand, there are external influences that come into play including the effects of westernisation and modernisation. As a result, all eight grandparents understand that there is an urgent need to pass on their indigenous Samoan knowledge to their grandchildren so that the culture, customs, practices and traditions of their homeland are upheld for many more years to come. Grandparent A noted that:

*We must keep teaching them [the grandchildren] the Samoan way of life so that when they grow up, they can stand on their own two feet.*

This implies that the Samoan way of life will help younger generations to achieve and accomplish things independently. The importance that the grandparents place on fa'aSamoa and the need for younger generations to retain it while growing up in New Zealand is therefore emphasised.

All eight participants value the importance of retaining important Samoan indigenous knowledge for future generations living in New Zealand. In interviewing the grandparents, the important indigenous knowledge that they wanted their grandchildren to know, learn about and retain were very consistent with one another. Fa'aSamoa in New Zealand was the broad grouping of this indigenous knowledge in which the grandparents wanted their grandchildren to retain. The specific aspects of fa'aSamoa within New Zealand are discussed further below.

In addition, two types of tacit IK emerged from the interviews with the grandparents which are respect (fa'aaloalo) and church (lotu). Furthermore, there were three forms of explicit IK that emerged which are family (aiga), the Samoan language (gagana Samoa) and other types of IK that do not fit into any of the previous categories. These are discussed in greater in depth in the following sections.

### **4.2 The Role of Respect (Fa'aaloalo)**

Respect - translated to "fa'aaloalo" in Samoan - is an integral part of fa'aSamoa. Respect is deeply rooted in all things Samoan and there are many forms of respect within fa'aSamoa, as well as many

different ways of showing respect (Efi, 2005; Keddell, 2006; Lilomaiava-Doktor, 2009; Tavana, 2002). As noted by grandparent C, *“In that one word – respect – there are many things that make up this one word.”* Fa’aaloalo is an essential part of fa’aSamoa because the culture is built upon it. Fa’aaloalo is somehow involved in everything that Samoan people do. It is taught in the home and is then expanded into the inbred values and standards that Samoans live by.

All grandparents highlighted the importance of fa’aaloalo for them personally, and for their families. The notion of fa’aaloalo encompasses different aspects in which all grandparents spoke about. Discipline and politeness are direct results of respect within the Samoan way of life, hence its importance to the Samoan people. It is also taught because it is a reflection of what is taught in the home. As grandparent A stated,

*If the family is good, then the children will retain the Samoan way of life and they will grow up knowing fa’aSamoa and respect.*

This implies that if a child does something disrespectful, then his or her parents are to blame and the family name is put to shame. Furthermore, grandparent C stated that,

*There is a popular saying that goes, ‘a mamalu le fale, e mamalu fo’i fafo’ which means if you are respectful and loyal to your family, then when you go to church, to school or anywhere else, then they can take nothing away from you.*

Again, the importance of respect to the individual as well as to the family is reiterated here. Fa’aaloalo is a principle that governs every Samoan’s behaviour within the culture which is why it is held in such high regard amongst many Samoan communities (Sa’olelei, 2011).

The three aspects of respect that are important to the grandparents include; respect for your elders, respect for your parents and respect within the church. These are discussed further below.

#### 4.2.1 *Respect for your elders*

All grandparents agreed that young people should always respect their elders. There is a deep desire amongst all the elderly participants that their grandchildren remain respectful to all elders that they come across in life. As grandparent B stated, *“Respect is very important. Respect older people. You have to listen to what they tell you to do. You don’t answer back.”* There are many ways to show respect for your elders in the Samoan culture in which the grandparents spoke about. These include numerous things:

- When walking past older people who are seated, you must bend over, bow your head and say, “tulou” or “excuse me”
- You must not talk to your elders while you are standing. Always sit down on the floor and cross your legs when you are talking to them
- Do not eat when you are talking to your elders
- Speak to your elders in a respectful manner and tone

By showing respect for your elders, you are showing that you have come from a family that has raised you with the right principles of fa’aSamoa. Grandparent C highlights the importance of fa’aaloalo when he says that:

*If the boy or girl holds on tight to these teachings and they don’t forget them, wherever they go, even if they leave the home, they will understand the importance of fa’aSamoa.*

#### 4.2.2 *Respect for your parents*



Respecting your parents is another aspect of fa'aaloalo that all grandparents stated was of absolute importance to them. Having respect towards your parents is essential to ensuring lasting relationships within the family. This includes:

- Ensuring that they are well looked after in their old age
- Making sure that they have eaten before the children have
- Doing their chores for them
- Running errands for them
- Not answering back to them when being told what to do
- Listening to everything they have to say

Grandparent A noted the following:

*If you know how to act respectfully and be respectful to other people, then your parents and family are very happy with you and proud of you.*

This is because you are showing that you know your culture and traditions as well and making a good name for yourself and your family. Furthermore, grandparent C states that, “*respect in Samoa means that the young Samoan boy and Samoan girl respect their parents.*” Evidently, all grandparents would like their grandchildren to remain respectful to their parents as they grow up in New Zealand. This means adhering to the requests made by their parents and ensuring that their needs are catered to as displayed in grandparent C remarks:

*Older people eat first and the children do the chores. After their parents have eaten, the children wait until the parents are happy and have been served. They wait for the blessing.*

#### 4.2.3 *Respect within the church*

The Church is considered by Samoans as the House of the Lord. Therefore, the church must be the place where the utmost respect is shown to the building and to its people. All grandparents stated that the church has been a crucial aspect of their upbringing and would like their grandchildren to retain this aspect of fa'aSamoa. Ways that Samoan people show respect in the church include:

- Wearing their “Sunday best” to church as a sign of respect
- When feasting, the children prepare and cook the food while the parents and older people eat first. It is only after the elders have finished their meals that the children may then eat
- Speak to the Minister and church elders in a respectful manner and tone
- The Minister and other church elders must always eat first at the head table

It is important for all grandparents that their grandchildren attend church and show respect for the building and its people. Grandparent A emphasizes this point when she states the following:

*I want my grandchildren to be able to go into a church and speak to the Minister in the respectful way. It is sad that she can't do that right now but I would like to teach her how so that she can teach her children one day.*

Grandparent B reemphasizes this:

*Although [my family] can't speak the language, they know that when they go to church they have to show respect. Give the Ministers a cup of tea or something like that because they know they've been told that. Those are the easiest things that I want them to know. Respect other people.*

### 4.3 The Importance of the Church (Lotu)

The church plays an extremely important role in the lives of Samoans. The church is the foundation of many things fa'aSamoa and is a central element in their lives. The Christian faith lies at the core of many things fa'aSamoa and is the place that these grandparents learnt a lot about Samoan customs, traditions and culture while growing up (Toso, 2011). From a Samoan cultural perspective, the role of the church is one of great honour and respect. Spirituality contributes to one's identity from birth as it helps to mould young individuals mentality and values (Toso, 2011). In Samoa, children attended bible classes or the Pastor's school at some point in their young lives. It was here that they would learn about the works of Jesus and the meanings behind the stories in the bible. Grandparent C mentioned that the first story he learned to read was Jesus' Sermon on the Mount. Grandparent A noted that, "*if you have a good group within your church, then the young people grow up and become very clever.*" She attends church almost every day where Grandparent C is the Minister.

All the grandparents in this study want their children to remain true to their Christian faith and continue to go to church as they grow up. The teachings of the church is what these grandparents want their grandchildren to know because they are based on the very principles that fa'aSamoa is based on. The grandparents would also like their grandchildren to retain their Christian faith wherever they go in life. Grandparent A states that:

*At my church, we teach the kids how to do the 'ava. They bring the tanoa [bowl], the fau [strainer] and they are learning as we teach them. They've never experienced it before so it is good for them to actually see it and learn it for themselves... If a family doesn't go to church then that family are not in touch with the Samoan way of life.*

### 4.4 The Samoan Language (Gagana Samoa)

The Samoan language is something that is very unique to the Samoan culture. It identifies its people to the country and allows for effective communication between Samoan people, especially between those who do not understand or speak English.

Grandparent C highlights the importance of the Samoan language to fa'aSamoa when he says that, "*if a Samoan boy or girl doesn't understand the language, they don't understand fa'aSamoa.*" Within the Samoan language, there is the informal use of it as well as the respectful, more formal use of the language. Grandparent C expressed his desire for his grandchildren to retain both the informal and formal use of the language. The informal use of the language is used in everyday conversation where people use the 'k' and the 'g' when saying words that consists of these letters. The sound used in these words is quite a hard sound and does not have a respectful tone to it. This informal use of the language is better used when socialising with friends or in casual conversation.

The more formal use of the language is when the 'k' sound is replaced with the 't' sound and the 'g' sound is replaced with the 'n' sound. This provides a more respectful tone to the conversation and adds more weight and power to the words therefore providing a softer, more formal sound. The respectful use of the language also means addressing people in a more reverential manner when speaking to them. Grandparent A states that,

*If you speak Samoan to someone, then you identify as being Samoan. If you speak English to someone, then you are not Samoan. When my granddaughter comes, she tries to speak Samoan... At least I can teach her one or two words at a time, then that is good. In Samoa, no one can grow up not knowing about the country and the language.*

## 4.5 Role of the Family (Aiga)

Family is noticeably an integral element of all things fa'aSamoa. Samoans are taught right from an early age that family is always the number one priority in life and this is no exception for the grandparents interviewed. Grandparent B states that:

*We've been told that number one is family. And now I understand and that's why we're very close. Sometimes we fight, we fight over there and we fight here but you know deep inside, family is number one.*

For grandparent B, one of the main reasons she moved to New Zealand was to find a job so that she could afford to pay for her brother and sister to migrate as well. This meant that they could all experience better job opportunities and improved living conditions compared to those in Samoa. This highlights the togetherness and respect that Samoan people have for their families. This experience is shared by many Samoans who moved to New Zealand in the 1950s and 1960s. Many migrated to NZ in search for improved job prospects so that they could either send money back to support their families in Samoa, or pay for members of their families to migrate to New Zealand.

The famous Samoan quote provided by grandparent C – “*pe'a mamalu le fale, e mamalu fo'i fafo*” – means that if you are respectful and loyal to your family, then when you go to church, school or anywhere else, they can take nothing away from you. This reiterates the importance of family to Samoans. It is one's duty as a Samoan to be supportive and loyal to their family for life. All the grandparents interviewed wish for their grandchildren to retain these family values and wish for them to be passed on from generation to generation in order for this aspect of the culture to survive.

## 4.6 Others important aspects

There were also three other aspects of fa'aSamoa that the grandparents consider desirable for retention by their grandchildren as they grow up in New Zealand. These are the use of fine mats as gifts, the traditional Samoan welcoming ceremony ('ava ceremony) and the use of plants and herbs as medicine. These appeared to be less significant components of fa'aSamoa compared to the four previous aspects that have already been discussed.

### 4.6.1 Fine mats

A fine mat – otherwise known as an 'ie toga – is a finely woven mat that is one of the most important items of cultural value in Samoa. They are considered the most precious item in ceremony and gift exchanges and have been a part of Samoan customs and traditions for centuries. Fine mats are passed from family to family for many years and are therefore greatly valued. All grandparents stated that they would like their grandchildren to learn about the use of fine mats and how to make them. Grandparent C states the following:

*I would prefer that they [his grandchildren] know how to open up the fine mats and show it to people. These are the things that girls ought to learn.*

Furthermore, Grandparent A stated that it is very important to her that her grandchildren know how to use fine mats and make them because it is a vital part of fa'aSamoa. The formal way of presenting fine mats as gifts to other people is taught to the children within the church that grandparent A attends.

In contrast to this, Grandparent B stated that the use of fine mats is not important to her and as a child she never really took interest in learning about these other aspects of fa'aSamoa. She noted the following:

*It wasn't important to me in those days. I was sort of doing other things. When I went back, because all my sisters knew how to do those things. They've been told to do and listen. I was sort of the black sheep of the family. But when I went back and I looked at them, there was quite a bit of fa'aSamoa that I lost because I didn't even try to learn from my mother.*

Grandparent B acknowledges the importance of the use of fine mats, learning about the traditional welcoming ceremony of ('ava ceremony) and the use of plants as medicine to the Samoan culture. However, she clearly states that learning about these things were not priorities for her growing up in Samoa. As a result, her children and grandchildren will not know about these aspects of fa'aSamoa.

#### 4.6.2 'Ava Ceremony

The 'Ava Ceremony is one of the most important customs within fa'aSamoa involving an earnest ritual where a ceremonial beverage is shared to mark the most important occasions in Samoan society. The ceremony always involves speeches and oratory as well as the formal drinking of 'ava, with special attention paid to precedence in drinking order. The 'ava ceremony is usually held when welcoming chiefs or a group of people into a village and is a great sign of respect.

Grandparent C stated that he would like his grandchildren to learn about the 'ava ceremony and its significance to Samoa. He highlights this when he says that:

*They ought to know and of course their mother holds a chiefly title so they should know when things happen and when things shouldn't happen. The 'ava ceremony is a very important part of fa'aSamoa. We need to retain this so it is important that my grandchildren learn about this.*

Furthermore, grandparent A agrees that is vital for her grandchildren to learn about the 'ava ceremony because it is a sign of respect and when you show respect, you are showing that you come from a family that has raised you with the right values and principles of fa'aSamoa. Again, grandparent B understands the importance of learning about the 'ava ceremony and its significance but she did not see it as a priority while growing up.

#### 4.6.3 Plants and herbs as medicine

The practice of using plants for treating diseases is a tradition that goes back many centuries in Samoa. Traditional healers in Samoa are called "taulasea" and are almost always women who have learnt their craft from their mothers and grandmothers (Castro & Tsuda, 2001). A taulasea would diagnose a disease that needs herbal treatment and then immediately collect the appropriate plant materials. These materials would be mixed with various things such as coconut oil or turmeric powder and massaged onto the patient (Castro & Tsuda, 2001).

Grandparents A and C believe that it is very important for their grandchildren to learn about using plants and herbs because of their ability to rid of minor diseases that exist within the body. Grandparent C states that this aspect of fa'aSamoa is important to him because his grandchildren were often treated with a combination of westernised medicines as well as traditional Samoan herbal remedies:

*With the four of my grandchildren from the age of one, my wife would give them all those things to massage the body. If they got a fever, my wife would use tea leaves to massage them. The idea is to bring out the heat that is inside of their bodies.*

This highlights the importance that grandparent C places on the use of herbal remedies for getting rid of any diseases that exist within the body.

Grandparent B made the following statement in terms of the importance of using plants and herbs medicine:

*If I can't teach my grandchildren to do those things, I'd rather use their brains to do something else because it's no good for them to learn it so no need to worry.*

This emphasises the fact that she does not regard these three aspects of fa'a Samoa as important anymore and that they have become obsolete now that they are living in New Zealand.

## **5 DISCUSSION**

Samoa indigenous knowledge has been at risk of erosion and endangerment for many years. The need to manage, document and disseminate this knowledge is greater now more than ever for the sustainable development of the country and its natural resources. A large part of this responsibility lies with Samoans who currently reside in New Zealand as there are more Samoans in New Zealand than there are in Samoa. This large proportion of NZ-Samoans has huge implications on the survival of Samoa's traditional knowledge. As Samoan people come into contact with the Westernised world, they become influenced by modern ways of thinking and begin to turn away from the traditional teachings of their ancestors and the indigenous knowledge accumulated at home.

There are many characteristics that ultimately define what indigenous knowledge encompasses. IK is generated within communities, it is culture and location specific, it is the basis for important decision making and survival strategies and it is dynamic and innovative in nature. Tavana, (2002) speaks about two forms of IK – explicit indigenous knowledge and tacit indigenous knowledge. Traditional Samoan knowledge comes in both forms with the former being easy to articulate and the latter being more difficult to express. However in order for the Samoan culture, customs, language and traditions to endure, efforts must be made to preserve and retain both explicit and tacit forms of indigenous knowledge. As more and more Samoans are leaving the homeland in search for better employment and educational opportunities for their families, it is essential that action is taken immediately to remedy the issue of the erosion of Samoan IK. The importance of doing so cannot be undermined as the consequences are dire for Samoans worldwide.

The literature states that many young NZ-born Samoans face identity issues which can contribute to the erosion of Samoan IK. Being grouped into a generic race of "Pacific Islanders" within the New Zealand context, while at the same time struggling to be accepted as a Samoan by island-born Samoans can be a daunting experience for many. The search for a secure identity can often be a journey of confusion for young people. As more and more young people succumb to the influences of the modern world, at the same time, their interest in the traditional knowledge taught to them by their parents and ancestors begins to decrease. This has worrying effects on the existence of Samoan indigenous knowledge. The role of technology is therefore an important one in retaining, documenting and disseminating this indigenous knowledge for future generations and for the sustainable development of natural resources.

There is a general consensus that new approaches and measures that combine tools in an appropriate way need to be developed for the protection of Samoa's IK. These systems need to be developed in close discussion and consultation with Samoan people themselves so that their voices are heard. Information technology has an important role to play in helping retaining Samoan IK. It has the potential to allow Samoan people to describe their knowledge, experience and skills in their own words, language and from their own personal perspective. It must be noted however that as older generation Samoans have very minimal experience with IT. As a result, the blended learning approach – which combines face-to-face knowledge sharing with online learning – seems like the best avenue to take to assist in the retention of important Samoan IK.

## **5.1 Limitations and implications for future research**

This study has three major limitations. Firstly, data were collected from only eight grandparents. In selecting the individuals to partake in this research, efforts were taken to focus on individuals with an in-depth knowledge and understanding of Samoan customs, culture, traditions and principles – thus providing a rich source of information. However, given this limited sampling strategy it is difficult to generalise the results of this study to the wider Samoan population within New Zealand. It is hoped that the findings stimulate others to pursue these and related research questions with research designs involving more grandparents. In doing so, it is expected that a collective and more definitive understanding will emerge regarding the importance of IK to New Zealand based Samoans and their perceptions of how technology can be used to retain this knowledge.

Secondly, data were collected from individuals who have spent the majority of their New Zealand life in Wellington. This makes it difficult for the results and findings of this study to be generalised to the wider Samoan population residing in other areas of the country. This is because factors such as population and geographic spacing come into play and can influence the views and perceptions of individuals participating in the study. As a result, it is hoped that future research efforts are undertaken that captures the opinions and perceptions of Samoans that are scattered all over the country as opposed to one area. This can effectively lead to a more distinct and comprehensible understanding of the results and findings.

Finally, the interviews with the grandparents were done so in both English and Samoan. When translating from Samoan to English, the accurate interpretations of the responses from the participants may be lost as the meaning of the words and phrases can often be diminished when doing so. However it was necessary to interview in Samoan in order for the grandparents to have the opportunity to communicate using their first language. Elements of the interviews were also better explained and understood when spoken in Samoan hence the need to interview in both Samoan and English.

In this paper, the views of eight grandparents were reported. However, it would provide a more complete picture if the grandchildren of each grandparent could be interviewed to gauge their reactions to the opinions of their respective grandparent regarding the type of IK to be retained.

Finally, the use and experience of ICT could be explored with both sets of grandparents and grandchildren. From these interviews, it may uncover their preferences regarding the use of technology and how ICT could be used in the retention of Samoan indigenous knowledge.

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