Sailitofa

Samoan-born teachers' perspectives of ICT in Aoga Amata.

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Aotelega / Abstract

The rapid growth of information communication technology (ICT) is evident in our society today. Few studies in early childhood education (ECE) have been accumulated to explore the relevancy in the integration of ICT in ECE. The notion of ICT in Aoga Amata (Samoan early childhood centres) has created tension, yet there is minimal study conducted to inform decision making when implementing ICT in Aoga Amata programmes. This study contributes by exploring Samoan-born teachers' perspectives and their application of (ICT) in Aoga Amata. The research approach is drawn from Samoan knowledge *sailitofa*, a concept that encompasses Samoan values and ethical approaches to collective and collaborative learning. The methodology is qualitative, specifically talanoa, and soalaupule, drawing extensively from Samoan language and culture to understand the perspectives of Samoan-born teachers. The use of talanoa and soalaupule groups captured participants' narratives and their consensus about the purpose of ICT in Aoga Amata. The findings emphasised the notion of ethical approaches and the need to develop relevant Samoan language for ICT, and centre policies to guide practices when integrating ICT into any aspects of Aoga Amata. Teachers perceived ICT as a useful tool for programme planning, creating Samoan resources, conducting further studies with children on particular interest topics, and for connecting with families and community in a regular manner. The findings also highlighted that teachers are keen to integrate ICT in their programme but were hindered by several obstacles such as availability of ICT tools, the running cost of updating and maintenance, lack of support, lack of Samoan words for uses and functions of ICT tools and the inadequate professional development to build ICT knowledge and skills for effective integration. In conclusion the findings further highlighted the need for future studies capturing the perspectives of parents as well as the governance and management for they influence decision making and effective integration of ICT in Aoga Amata.

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List of Abbreviations

COMET	City of Manukau Education Trust
ECE	Early Childhood Education
ERO	Education Review Officer
ICT	Information Communication Technology
IT	Information Technology
SASASIA	Socaiete Aoga Amata I Aotearoa (Trust for Samoan Early Childhood in Aotearoa)

Fa'amaoniga o le lautusi/ Attestation of Authorship

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgement), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning."

Fa'atamalii Kesi: _____

Date: _____

Fa'amaoniga o le lautusi/ Attestation of Authorship

Ua fa'afetai! Ua malie le loto i le fa'asoa/ Acknowledgements

Last but not least, to my beautiful daughter, Naydeen Angel Sanelivi, who was often neglected in order to attend to this study. Your cupcakes and train of hot Milo when I arrived home got me through some very hard times. Your bear hugs, smiles, and words of encouragement when I feel down and about to give up lifted my tired spirit and lit my long hours into the night. Thank you for attending to our cooking, cleaning, washing, and taking care of me when I forgot to take care of myself. You are the best daughter a mother ever asked for, hence why this work is dedicated to you my precious and dearest daughter.

CHAPTER ONE *Fa'atomuaga* / Introduction

1.1   *Fa'atomuaga* /Introduction

"*E sau le tau ma lona fuata*" *(*each season has its own harvest) highlighted that the world we live in evolves and is not in stand-still mode (Kesi, 2013a). Currently the technology harvest is rapidly growing and is changing the way people meet, convey messages and interact with one another. In the 21 century, technology has brought many changes to how information is distributed and retrieved, changes such as the integration of technology in Aoga Amata takes time. To explore such change one must "begin the transformation with oneself" (Kishnamurti, 1954, p. 42).

This chapter begins with a journey towards the chosen topic followed by the significance of the research for Aoga Amata context. The chapter will conclude with an overview of each chapter and an introduction of the research framework and title of the study.

1.2. Talaaga /Brief history of Aoga Amata to contextualise the study.

Pasifika people have migrated to New Zealand in search of a better life and education for their children (Leavasa-Tautolo, 2004: Ete, 1993; 2013). The term Pasifika is used in Aotearoa to encompass the seven Pacific nations that migrated to New Zealand (Ministry of Education, 2013a; Manu'atu & Kepa, 2003). Pasifika people have been very active in their children's education which leads to initiatives that open up Total Immersion and Bilingual Pasifika centres in Aotearoa since 1980s. Pacific people are defined by the 1996 New Zealand Census as constituting New Zealand residents who originate from the seven Pacific nations of Samoa, Tonga, Niue, Cook Islands, Tokelau, Fiji and Tuvalu which includes those both island-born and New Zealand-born.

I grew up surrounded by nature; rivers, valley, mountains, plantation and greenery which is the opposite of the ICT world that my daughter has come to know. I was born and raised in Samoa by my grandparents until I migrated to New Zealand around 17 years of age. Growing up in Samoa means I have fluency in my Samoan language with a great understanding of my FaaSamoa (Samoan culture) which is crucial when one works with Samoan participants. During my formal education years, Samoan language was the core language used throughout my Primary to Intermediate years with English language as the main language for communication in my College years. During the few months that I was in colleage, I was introduced to typewriters in one of my subjects which I found fascinating and wanted to explore further.

Migrating to New Zealand was a culture shock. I found pace of living faster and was challenged by housing structures, the English language as the core language for communication, as well as the rapid growth of ICT devices and software. One of the disappointments when I arrived in New Zealand was that I was not able to continue college, nevertheless, Aotearoa provides many chances even for adult learners to grow their knowledge and understanding. As a mother I was indeed thankful to have many opportunities available to support my daughter and gain a tertiary qualification. Through this experience I have come to observe that many of the teachers in Aoga Amata are mature Samoan-born like myself. As a parent helper in the Aoga Amata where I have enrolled my daughter, I was motivated and inspired by the teaching team to gain a qualification. Further studies means further developing of my personal and perfessional self which led to better understanding of the English language and ICT.

This research focussed on one group (Samoa) under the Pasifika umbrella in order to gain a better understanding of how ICT is perceived and used in Aoga Amata (Samoan

preschools). Samoan people started to migrate to New Zealand about 65 years ago and continue to grow in numbers as identified by the 2013 New Zealand Census. The establishment of Aoga Amata in the 1980s focused on fostering and enhancing Samoan language and culture (Ete, 2013). Early literacy education for young children that began in Pastors' homes have been extended to Aoga Amata with the similar philosophy, to grow children's awareness of their identity, their language and their culture (Tanielu, 2004; Ete 1993; 2013). Tanielu (2013) have highlighted in her presentation for SAASIA the need to pay attention to changes (like ICT) that are now influencning our (Samoan) way of living and communiting with one another. With the vast growth of technology today, the study therefore set to explore the perspectives of Samoan-born teachers employed in Aoga Amata.

1.3 O le faiva fa'atofasaili /Research journey

I found myself reflecting on my past and present experiences while struggling with the dilemma of framing my research question. Particularly considering the topic is rarely discussed at any Samoan gathering. Arriving at this topic might have something to do with the influence of global developments in technology (Falk & Blumenreich, 2006). I reflected upon my first semester of college where I briefly encountered what I thought was an amazing technology, the typewriter. The loud clicking sound that each key makes when pressed was magic to my ears as it flicks out of its place and pressed to print my thoughts of words and numbers on papers. The experience equipped me with typing skills, shorthand and a boost of confidence to work with any software and hardware devices.

Time is crucial when it comes to making a decision regarding a research topic. It takes time to generate the right topic if we are to "discover not only in seeking new

landscapes but in having new eyes" (Falk & Blumenreich, 2006, p. 22). *Mata* (eyes) is an important aspect of a human body and for Samoan people mata "signify the importance of vision" and "depict multiplicities of meanings which places emphasis on the importance of seeing" (Tagoilelagi-Leota, Kesi, Tagoilelagi, Penn & Autagavaia, 2013, p. 156). Through *mata* one sees the importance of relevant experiences that will contribute to quality of life. The necessary journey through lenses (*mata*) of both my past and present make sense of the known and unknown in preparation for fully engaging with the chosen topic.

Years after migrating to New Zealand I enrolled in a Diploma of Computing in 1992 where I was introduced to a desktop, a top of the market ICT tool in those days. Completing the Diploma of Computing meant developing my keyboard skills further and building an understanding of various ICT hardware and software. Once again, memories surface and the wave of excitement I once knew was rushing through my fingers again. I was captivated by the rapid growth of ICT from desktop, to laptop, to tables which fuelled my interest. This grows as contemporary IT/ICT (Information technology & information communication technology) flood in rapidly which now change the way we communicate, retrieve and send information around the world (Sao, 2012; Bolstad, 2004).

In 1998 when began my tertiary studies, I observed the need to have ICT skills for a variety of writing forms including assessments. I also felt the waves of excitement quickly die down due to the fact that ICT is not integrated in early childhood papers. My interest in ICT emerged again in 2007 when teaching the computing paper for the National Diploma of Teaching ECE Pasifika programme. In the seven years of teaching the paper I have observed and noted mature Samoan and pasifika students show fear,

discomfort, frustration, lack of confidence, and skills when working with computers, laptops, and the internet. Seeing how Samoan-born student teachers respond and encounter ICT raised my curiosity of how much that transfer into Aoga Amata when they become teachers of children who are born in this technological world.

My interest grew as I visited students in mainstream and Pasifika early childhood settings during practicum (professional practice) where I observed different approaches regarding ICT in various settings. What interested me the most was the absence of ICT in most teaching and learning environments of Pasifika/Samoan centres where children who are regarded as the digital generation enrolled (Bolstad 2004; COMET, 2005).

It is through my lenses (*mata*) of experiences coupled with the literature on ICT in early childhood that I arrived at my research question exploring an area of study that is not often heard or discussed in Samoan gatherings.

> Research question: *In what ways do mature Samoan-born teachers perceived and use Information Communication Technology (ICT) in Aoga Amata (Samoan early childhood centres)?*

1.4. *Auga o aute o le tofasaili* /Purpose and significance of this research

Research conducted by COMET (2005) set out to identify the usage of ICT in early childhood centres in the Manukau area outlined the low level of usage of ICT in Pasifika/Samoan settings. The literature, coupled with my experience and observations guided me to seek Samoan-born teachers' perspectives of ICT as they are the key people in Aoga Amata who are educating children in this digital period. Oldridge (2010) highlighted the need for research to document early childhood teachers' thoughts as teachers' values and attitudes towards ICT influence the effective integration of ICT in

ECE. This research aims to highlight the perspectives of Samoan-born teachers who are employed in Aoga Amata in Aotearoa New Zealand.

Total immersion Aoga Amata in New Zealand have been organised to preserve and enrich the lives of Samoan children in their own culture and language. Samoan-born teachers therefore plays a crucial role in enriching the children's gagana (language) and aganuu (culture). My curiosity grew as I reflected on what I have encountered in my years of studying a Pasifika ECE degree to working in Aoga Amata and teaching an equivalent of a level 2 computing to Pasifika/Samoan teachers in the National Dilopma of teaching ECE Pasifika. With the fast growth of ICT, I began to wonder how Samoan-born teachers perceive and use ICT in their teaching and practice to enhance the philosoy of Aoga Amata.

We need to not ignore that there is a need for research and discussion around ICT in the field of Aoga Amata because we are now living in a technological world, the world which Samoan children are very much part of. This study only covers a small scale of what we need to research. The study focus on highlighting the voices of our Samoan-born teachers and hope to identify how information communication technology impacts positively on Aoga Amata philosophy. This will be further elaborated on throughout the thesis.

Figure 1 COMET (2005)

80%
70%
60%
50%
40%
30%
20%
10%
0%

72%

35%

16%   17%

21%

Education & care centre

Kindergarten

Pacific Islands EC group

Te Kohanga Reo/Maori EC group
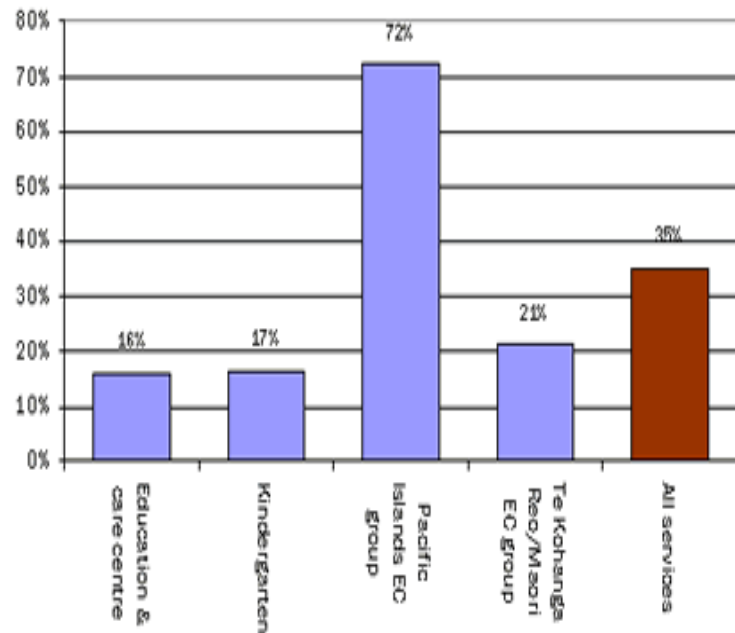
All services

Figure 1: Services in which children do not use ICT.

Figure 1 illustrates the percentages of Pasifika centres in which children do not use ICT. Challenges such as lack of funds, time and professional development to build teachers' understanding have been identified in the research (COMENT, 2005). Interestingly, recent studies (Oldridge, 2010; Sao, 2012) have outlined similar issues if not the same, still occurring in ECE since Podmore & Craig (1989) conducted their first ICT study. Donahoo, (2013) stated that it is "not what the technology can do that makes it important, it is the way it has reignited passion and ideas in teachers so they can celebrate a new way of teaching in this digital age" (p. 36). The study therefore set to explore the view of Samoan-born teachers not only to gain an insight into how they view ICT but also to outline benefits and challenges they might encounter in Aoga Amata.

1.5 *Autu o le sailitofa ma lona faavae* /Framework and title of the research

This study seeks (*saili*) knowledge and wisdom (*tofa*) from participants' lived experiences and their own perspectives of ICT in Aoga Amata. As a researcher in the interpretive paradigm, there is an expectation to relate and interact with participants in an effort to understand their experiences and the meaning they conveyed (Grant & Giddings, 2002). Anae, Coxon, Mara, Wendt-Samu & Finau (2001) emphasised the need for Pasifika researchers to create their "own sources of knowledge" and of "appropriate standards" that are rooted in their "own cultural values, process and practices" (p.43) that will contribute to education and study with Pasifika people. With that in mind, this study introduces the concept of '*sailitofa*' (in search of wisdom) as a framework when working with Samoan participants.

The concept of *saili* is simply referring to seeking, to search and/or to find and so *tofasaili* as noted by Tui Atua (2009a) is to search (continuously) for wisdom or the wisdom of continuously searching for truth in areas of interests. To search, one must have the heart to commit (Mabbs & Laureta, 2013), to be transparent and to be humble when approaching the *va fealoai* (relational space) and *tuaoi* (know the boundaries) while working with participants. To saili (search) one must be in tune with one's inner and outer self to become one in the search for knowledge.

The word *tofa* has multiple meanings depending on the context. When farewell people you will hear the word *tofa* which means goodbye. This acknowledge the mafutaga *motusia* (separation of the relational space) when one leaves or stays behind. Doing so acknowledges the *va fealoai* and *va fealofani* in one's relational space (Tuagalu, 2008). In another context where a Matai (chief) is resting or sleeping, *tofa* is used when referring to him resting to show respect. In the Samoan culture people says the best results for

decision making are the ones that have been liuliu (tossed and turned) through many nights of rest.

Tofa is defined as wisdom, wisdom to learn, to know, to understand, to take action and to find better solutions (Tui Atua, 2009a). The term *tofa* when coupled with other concepts brings meaning and depth to various contexts for example: *saili le tofa* (in search of knowledge), *tofa manino* (philosophy), *tofa mamao* (mission/vision statement) and *tofaliuliu* (reflective thinking). These concepts are often used by Samoan early childhood teachers in their professional dialogues for example in planning, self-review, ERO preparation and partnership process. The concept of *saili le tofa* or *tofasaili* has therefore adopted for this research to seek understanding, knowledge and wisdom through literature and living experiences of Samoan-born teachers.

The sailitofa approach can be further develop by Samoan people as a framework for research. *Sailitofa* for this study takes into consideration protocols that must be understood and applied in all levels of engagement to encourage and support how one defines and understands the problem and determines a solution. To involve Pasifika/Samoan people in research, the first protocols of engagement must be *alo mai alo atu* (face to face genuine talanoaga). *Alo mai alo atu* acknowledges the faaSamoa principles of faaaloaloa (respect), alofa (love) and tautua (service) in the coming together to established reslationships and core connection. The following are crucial protocols when bringing people together:

- Prayers to open and close meetings for boundless blessings.
- Provide a meal, a way to show respect and acknowledge beforehand the valuable contribution from participants. Such practice is crucial in the Samoan culture as a

way to enrich both the mind and body as people connect through the nourishment of the food as well as in their talanoaga (dialogues).

- In the context of research, a small mealofa (koha) to further convey appreciation of participants' time and intellectual property shared. This comes when *alo mai alo atu* is enveloped by *faaaloalo* (respect), *alofa* (love) and *tautua* (service).   During my data collection, each soalaupule fonotaga (similar to focus group) and talanoaga (similar to peer interviews) had a meaai (hot meal) and small monetary mealofa for participants' pasese (fare).

Getting to know participants and building a relationship is the crucial key to soalaupule and talanoaga sessions. Nabobo-Baba (2005) emphasised the notion of research to support and affirm existing protocols of relationships, ceremonies and knowledge acquisition. The design of this research focuses on being directly involved in the process through soalaupule and talanoaga with participants. I like to think that the participants in our discussion were able to contribute to the agenda and data analysis to construct how they wish the data to be seen.

1.6. *Aotelega o mataupu taitasi* / Overview of chapters

The first chapter outlines my research journey and the purpose of this study. It includes a brief history of Aoga Amata. Chapter Two explores reviewing the perspectives of others in relation to the main question of the thesis. The literature review will cover the basic concepts underpinning my research. The chapter also emphasises the notion of connectedness for children's sake, children as capable beings, ICT as a teaching resource and the need for teachers to sharpen their knowledge and skills for children of the 21st century.

Chapter Three outlines how the study was conducted using qualitative and talanoaga methodology. The section reviews the challenges of soalaupule in making sure everyone participated at the set time. The talanoaga and soalaupule methods are explained with reference to Vaioleti (2003), Utumapu (1998) and Prescott (2008) to name a few. The final part of the chapter discusses the recruitment of participants and the data collection as well as the limitation in finding literature to support the soalaupule concept as a method.

Chapter Four focuses on the findings of the study. The view of mature Samoan-born teachers and stories told are organised and categorised into commonly occurring themes. The themes were closely linked to questions asked during soalaupule fonotaga and talanoaga sessions. Participants' mother tongue is used first to show authenticity followed by English translation for non-Samoan readers. Pseudonyms are used throughout the thesis to prevent the identification of participants as they requested.

Chapter Five is the core of this study as this is where the critique of the results is conducted with respect and in an analytical manner. The concluding chapter provided a space for contemplating and reflection in order to highlight connections to the main points and questions of this study.

CHAPTER TWO *Saililautusi /* Literature Review

2.1 *Fa'atomuaga* /Introduction

We are living in the 21st century that is constantly changing and being reshaped by digital and technological devices (Kesi, 2013b). With that in mind, I set out to explore and examine Samoan-born teachers' perceptions and the use of ICT in Aoga Amata. The chapter focuses on the literature relevant to the notion of ICT and its implementation in an Aoga Amata context. The chapter begins by outlining a brief history of Aoga Amata to contextualise the conception of this study, followed by: (1) Faatekonolosi ma le 21 seneturi / ICT and the 21century, (2) Faatekonolosi ma aoaoga / ICT and the early childhood curriculum, (3) Faatekonolosi ma alagaoa / ICT as a resource, (4) Faatekonolosi ma matafaioi a faiaoga/ICT and the teacher's role , (5) Faatekonolosi ma le Pulega / ICT and management and the (6) Summary.

2.2 *Aoga Amata I Aotearoa* /Aoga Amata in Aotearoa

Pasifika is the term used to identify various peoples from the Pacific Ocean area who migrated to find a better future in the land of Aotearoa. Pasifika people migrated from Melanesia, Micronesia and a greater number from Polynesia known as people from the islands of Tonga, Tokelau, Tuvalu, Niue, Cook Island and Samoa (MoE, 2013a). There are differences between Polynesian cultures which often go unnoticed when knotted together under the umbrella term Pasifika (Manu'atu & Kepa, 2003). With that in mind, this study, therefore, focuses particularly on the perspective of Samoan teachers in Aoga Amata Aotearoa. The movement to establish language-immersion programmes (Aoga Amata) began in 1982 (Tagoilelagi, 2013; Ete, 1993). The notion was to foster and maintain the Samoan language and culture in Aotearoa. This movement was inspired

by the Māori people's initiative to operate Kōhanga Reo with the aim to revive, foster, and enrich their *oloa* (treasure) which is their language and culture (Mara, 1998).

Aoga Amata was part of the Language Nests (Pasifika early childhood) initiatives which was set up largely by women from Samoa, Cook Island, Niue, Tonga and Tokelau communities (Mara, Foliaki & Coxon, 1994; Utumapu, 1998) for their communities. In the 1980s, four Aoga Amata operated around about the same time, with two in Wellington and two in Auckland all aiming; "to teach the Samoan language and culture; provide preschool education; assist with social and emotional development; and enable participation in church activities" (Utumapu-McBride, 2013a, p. 188).

The 2013 Census showed an increase in numbers of Pasifika children participating in early childhood as highlighted in Figure 2 (MoE, 2013a; 2013b). This shows Pasifika families and communities are aware of the importance of educating children from a very young age.

Prior participation in ECE of children starting school by ethnic group, 2000-2013
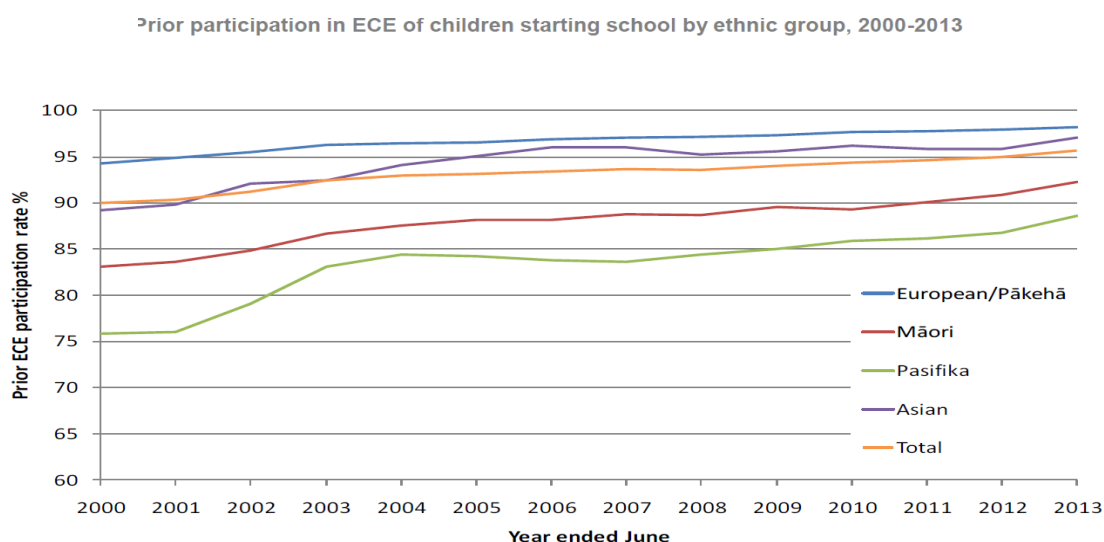
Figure 2 Census increase of Pasifika Children in ECE (MoE 2013a).

Furthermore, the 2013 census highlighted in their collected data (see figure 3) the growth of Pasifika centres operating in Aotearoa New Zealand using 50 to 100% of the first language in their programme (MoE, 2013b).
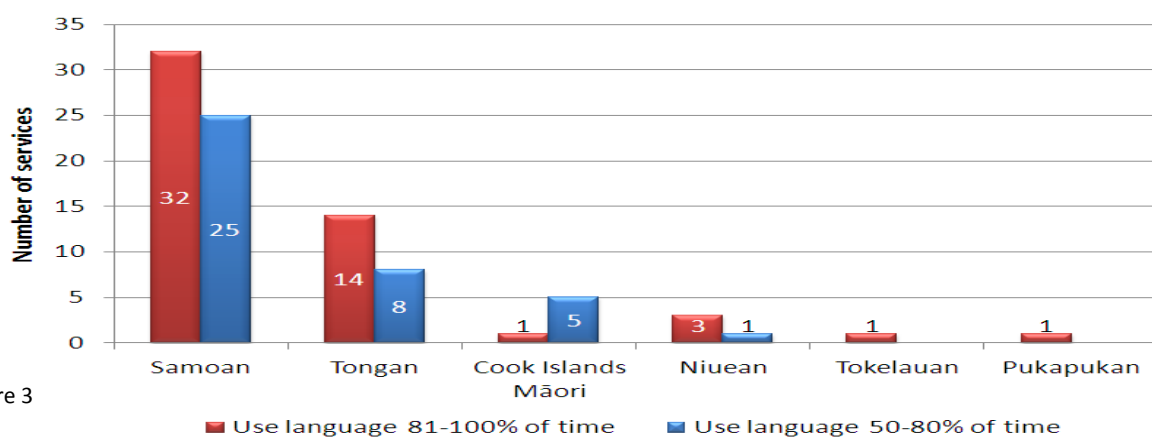
Figure 3

Figure 3: First language usage in Aotearoa (MoE 2013b)

As seen in Figure 3, Samoan is the largest group that uses 81-100% of their first language in Aotearoa (MoE, 2013b). To Samoan people, knowledge of who they are, where they are from, their history, and knowledge of their ancestors are all part and parcel of who they are as people. This encompasses with the knowledge of their language and culture (Tanielu, 2004). Meleisea (1987) highlighted that "…for Samoans, knowledge is power and the most powerful knowledge is historical knowledge which people treasured and guarded in people's heads, notebooks, locked boxes, and mats under mattresses" (p. vii).

Samoan culture is an oral culture where knowledge and skills are transmitted across generations through word of mouth. The practise not only transmitted knowledge and skills but also transmitted the visual skills, where one can read and learn from one's environment (Baldauf, 1990). Mata (eyes), therefore, becomes important in the notion of transmitting ones' knowledge especially if it is to recognise skills of how to read the

ocean, stages of plants and even the weather (Kesi, 2013a). In contrast to today's world, *mata* can transmit a whole lot more about the world we live in through ICT, a contemporary way of passing on knowledges as well as retrieving and storing information.

2.3: Faatekonolosi ma le 21 seneturi /ICT & the 21st century

Helu Thaman (1999; 2001) spoke of culture as a way of life for a people including storing information, knowledge, values and skills expressed through a language and transmitted to another for the sake of cultural continuity and survival. She continued by pointing out that education and culture are inextricably interwoven since the content of all education has value that is always associated with a particular cultural agenda. Culture as defined by Tylor (1896) is a complex whole which encompasses knowledge, belief, art, law, custom, morals and any capabilities and habits acquired in society and still holds as a definition in the 21st century. Culture has many different meanings and is defined as everything from language and religion to social behaviours and habits. Today ICT has transformed the way people behave, act, communicate, and preserve knowledge. There is an emphasis for indigenous cultures to use ICT to support and encourage cultural diversity, preservation, and promoting of languages. However, researchers such as Postman (1988) are sceptical due to the western designs of ICT and the focus on individual learning in contrast with Pasifika traditional collaborative learning.

There has been a rapid growth of ICT over the last 50 years (Leidner & Kayworth, 2006) for example the change from a room size computer to a hand held computer has meant that the latest technology is now highly accessible (Kesi, 2013a & Kesi, 2013b). ICT has adapted to 21st century use rather than developed into a new tool as viewed by Samoan

people. Leidner and Kayworth (2006) pointed out that the invention and introduction of the personal computer (PC) or desktop came in the 1980s followed by the arrival of the internet on existing narrowband telecommunications or infrastructure that had been designed for telephones. The arrival of personal computers allowed individuals to store a wide variety of data. It also provided access to the interactive world of the internet including games, graphics, audio, video, moving images and more (Sutherland, et al., 2004). In 1985-1995 the first technology wave was the introduction of email; followed by the second wave in 1995-2000 that centred on the web. The third wave of technology is from 2005-2015 involving a variety of applications which have a huge advantage for education. These include internet, digital fibre-optic, wireless technologies all set up for the internet for voice, data, images, audio, and video communications (Ferris, 2010). Furthermore, Ferris warned that there is more to come and that the world of technology is growing faster than ever. In the area of health the use of microprocessors by surgeons are implanted in the brain to take over damaged cells. These are currently being developed for a range of medical purposes. When that is successful, conditions such as blindness and deafness could all be treated with microprocessor technology (Ferris, 2010). These rapid developments will impact the lives of Samoan people.

ICT devices are pleasing to one's mata (eyes). This visual appeal can make us feel good about working at the cutting edge of innovation (Hatherly, 2009). ICT does refer only to computers; however, with the rapid growth of ICT we now have so many more digital devices at our fingertips such as cameras, laptops, iPod, tablets, iPads, mobile phones, mobile toys, internet and interactive white boards and so forth (Kothari, 2010). ICT devices are becoming affordable, accessible and highly communicative which means an increasing number of Samoan parents and children today have the latest technology in their homes, in their cars and in their bags.

ICT is becoming a culture, a way of doing things, a way of living in the 21 century. Each day individuals are exposed to some form of technological device as part of their living environment. Individuals and families today are no longer sitting around waiting for letters from loved ones to arrive as ICT has changed the way we communicate with one another. Skype and Facebook are preferred modes of communication near or far across oceans (T. Patea, personal communication, March 10, 2012).

2.4 *Faatekonolosi ma a'oa'oga* /ICT and ECE education curriculum

Children are viewed as competent and capable beings in *Te Whāriki*, (MoE, 1996) the national early childhood education curriculum (MoE, 1996). Literature from research conducted in early childhood centres including one Aoga Amata noted that children of today are born with abilities to help them explore and manipulate ICT devices available to them (Aoga Amata Fa'aSamoa, 2009; Hatherly, Ham & Evans, 2009). *Te Whāriki* (MoE, 1996) offered guidelines for teachers to empower children's learning and connection with communities and families through communication, which today can be through ICT. Application of *Te Whāriki* (MoE, 1996) principles can be applied for example:

1. empowerment – Children exploring with ICT for their own learning – documenting points of significance
2. Holistic Development – ICT supports and extends children's prior knowledge and current interests.
3. Family and Community - ICT opens other channels of communication between different environments.
4. Relationships – ICT allows connection to the wider world (Oldridge, 2010).

Learning occurs when learners process new information or knowledge in a meaningful way that makes sense to children's own frames of reference, their inner world of

memories and experiences (Helu-Thaman, 2001). Technology offers powerful tools for the realisation of instructional concepts by means of simulating real-life situations. Afamasaga-Wright (2008) highlighted the need for diverse teaching and learning environments in order to effectively integrate ICT in programmes that will benefit children and families. ICT can change the way we educate children because teachers no longer have to control the learning environment but can now learn alongside children (MoE, 2005).

It is timely that *Te Whāriki* (MoE, 1996) be reviewed to include the integration of ICT, nevertheless, since this document is open-ended, teachers can link its principles and strands to their ICT programme. Literacy and language development are emphasised throughout *Te Whāriki* (MoE, 1996) not just in writing and reading or listening and speaking but with activities such as drama, dancing and movement, expressive art and learning media. ICT will therefore provide diverse ways of teaching and learning that will support children's interests and development.

Foundation for Discovery (MoE, 2005), was put in place to provide policy guidelines and effective guidance for the integration of ICT in the ECE sector. It is suggested that ICT in ECE should aim to empower children's holistic way of learning, strengthen partnerships with families, communities and the wider world and provide responsible and reciprocal relationships between people, things and places (MoE, 2005). The framework (MoE, 2005) suggested that ICT should be seen as a tool that is used in conjunction with many others to empower children to learn. It further emphasised that ICT should not replace the existing mechanisms of learning, such as puzzles, family corners and the outdoor area.

A further study focused on teachers' perspectives with the notion that teachers' perceptions and attitudes towards ICT can influence the way ICT is positioned and made available for children to access in their learning environment (Oldridge, 2010). In Scotland, a research project on how eight teachers enhanced 3-4 year old children's encounters with technology, highlighted authentic learning opportunities were provided as teachers begin to develop a body of knowledge and skills to confidently integrate technology in their programmes (Stephen & Plowman, 2007). However, this was possible as there were resources available not currently existing in Pasifika centres.

It is clear in the framework that ICT in ECE should not just focus on children working with computers as it is about children, families, communities and teachers working together to gather records for learning and sharing learning experiences to enhance children's learning about the world. The framework (MoE, 2005) further pointed out the commitment of the government policy to support the use of ICT in early childhood and to provide ICT professional development for centres.

The *Taiala for Samoan in the New Zealand Curriculum* (MoE, 2009) is used in alignment with *Te Whāriki* (MoE, 1996) in Aoga Amata. Taiala showcases the same notion of empowering children's education and offering access to a flexible education system that will meet the needs of Samoan children and young people in Aotearoa (MOE, 2009). The *Taiala Curriculum* was set out with a specific aim for all Samoan children in early childhood and schools to develop an understanding of their fa'a Samoa language and culture within New Zealand through "verbal and non-verbal, experiences, stories, texts, images, visual symbols, creative and expressive form" (MoE, 2009, p. 7). *Taiala Curriculum* and the *Ministry of Education plan* (2013-2017) noted the importance of supporting Pasifika children and students to learn about their culture and build up their

language. Aiono-Le Tagaloa (1996) argued that where there is no language there will be no culture, "*A leai se gagana, ua leai se aganuu, a leai se aganuu, ona po ai lea o le nuu*" (When you lose your language, you lose your culture and when there is no longer a living culture, darkness descends on the village) (Aiono-Le Tagaloa, 1996, p.1).

The *Taiala, Samoan Curriculum* (MoE, 2009) used the concept of so'oatulau (continuum) to emphasise the connection from one context to another. The concept outlined the vital role of teachers in providing "for a smooth transition from one setting to the other and from level to level" (MoE, 2009, p.23). Such a transition is essential today when we are experiencing a "third wave" of technology with a variety of network devices and programmes (Ferris, 2010). Children are exposed to those devices and programmes at home and in their own community, when they visit a friend and when they enter a new school. Brown and Murray (2006) pointed out there is little we can do and gain from debates about whether or not ICT has a place in ECE, rather the important question is what kind of place should ICT have and how should it be used by children and teachers to promote the goals and philosophy of our centres? So'oatulau concept reminds Samoan teachers to be active and be innovative in their thinking in order to lead and bridge any gaps regarding ICT as children transit from one context to the next in this interlocking world.

2.5 Faatekonolosi ma alagaoga /ICT as a resource

The Aoga Amata Fa'asamoa is the only Samoan ECE centre that participated in a study in 2009 (Crichton, Tapusoa, & Tulia) where they explored the use of ICT in their Aoga Amata. The study outlined the limitations of Samoan language resources in all areas of education. The study was aimed at supporting the teachers' skills and enhancing their use of ICT for their teaching and resource making. Participants in the study often use the term *alagaoa* (resources) when referring to ICT as a resource. Teachers voiced the need to grow not just their skills in using ICT but also the language used when referring to ICT hardware and their knowledge of how to integrate ICT in their daily programme.

The challenge teachers found was the limitation of their skills with ICT devices and programmes they had in order to create alagaoa with the children (Aoga Amata Fa'aSamoa, 2009). Nevertheless, Aoga Amata Fa'aSamoa preschool stated that time permitted them to pursue their work and gain abilities along the way. One of the strategies they put in place was to do the study as a team, and second was to learn one software function at a time. Teachers were able to create folders of Samoan, songs, story books of children's work and card games which contributed to the teaching of the Samoan language and culture in their Aoga Amata. The issue for me, was finding more Aoga Amata research or a follow up from the Aoga Fa'aSamoa study to further explore the challenges and recommendation noted in the study.

In terms of *alagaoa fa'atekonolosi* (technology) such as computers, and digital devices COMET (2005) conducted a research and found in their study a very low number of Pasifika centres used those tools in their centres. The project included home based, Playcentres and kindergartens, childcare and few Pasifika centres from which information

was collected on the level of ICT use in their service. The data highlighted the very low level of participation by Pasifika centres in using internet, computers, and digital devices. Sutton's (2007) study found that Aoga Amata/Pasifika centres do not have enough ICT resources to work with children or with colleagues which explains the low level of participation. Sutton (2007) further support by stating that in some centres, they have one computer for administration only.

ICT has the potential to change the shape of any learning environment, change the relationship between teacher and children, and offer new tools to support new ways of teaching and learning and to open up access to knowledge across distances. The ECE ICT Professional Learning Programme (Hatherly, Ham & Evans, 2009) was designed to guide the effective use and investment of ICT in ECE. They also found that ICT was the tool to construct pepeha (books) and a range of other teaching resources (DVD, cards, CDs) in Te Reo Māori.

Bolstad (2004) and Van Scoter and Boss, (2002) put forth the view that ICT offers substantial opportunities to strengthen literacy due to the multimedia functionality that can be used for storytelling. Mainstream early childhood teachers can see the usefulness of this tool for children whose English is not their first language. Plowman and Stephen (2005) found in their work with children that having a computer available to them at all times was useful because it provided a shared focus for those who did not speak the same language. Traditional skills in using the natural environment can be seen as ICT skills with the notion of using anything that allows people to gain information.

Samoan culture is rich creatively if we think about what our ancestors have left for us. During their time they created resources and technology that were available to them at

the time. They shaped and formed technology tools for boats, fale Samoa, (Samoan houses), fine mats, the ie toga, tapa and our pe'a and malu (tattoos for men and women) all done with some form of technology. In the 21st century we are presented with digital devices and software that is growing faster to bring the ways of the world to our finger tips including our Pasifika cultures. The positive would be that generations to come would be expose to the Samoan culture and way of living in whatever part of the world they may choose to settle.

Sheridan and Pramling Samuelson (2003) highlighted the advantages of working with computers for creative purposes. They further stated that through technologies, drawing, colouring, and creating patterns can further advance children's knowledge and creativity of the art they have identify themselves with as Pasifika/Samoans. This only happens if we (teachers) are active in the same area.

2.6 Faatekonolosi ma matafaioi a faiaoga /ICT and the teachers' role

Matalalaga is a term used to acknowledge authentic patterns of weavers and therefore 'an expert weaver may be referred to as one with great *Matalalatga*' (Tagoilelagi-Leota, Kesi & Galu, 2013). Utumapu-McBride, Epenesa, Toia, Tone-Schuster, & So'oaemalelagi (2008) highlighted the term *matalalaga* as the "art of weaving (fine mat) a skill that is nurtured and encouraged throughout a young Samoan girl's life" (p.151). To master one's matalalaga, one must have patience for the duration of time, a willing heart and an open mind as often it takes years for the completion of one single mat" (Kramer, 1994, p. 31). Today, teachers are required to have the art of working with ICT tools in order to integrate those ICT devices and software that are now becoming a normal part of a young children's world.

As teachers, it is our role to introduce changes in children's learning environments to prepare them with strategies and solutions. The changes should challenge children's development, encourage their thinking and help make sense of their surroundings (Isenberg & Jalong, 2001; Crichton et al., 2009).

Different studies (Hatherly et al., 2009; Plowman & Stephen, 2005; Sao, 2012) regarding ICT in mainstream centres outline how teachers used ICT with their children and how it supported the work they currently do with their children as well as enhancing their documentation. The ECE ICT Professional Learning programme report (Hatherly et al., 2009) covered some of the many ways that mainstream teachers can use video cameras, digital cameras, laptop and computers with their children. One example is the creation of children's e-portfolios which they use as a way to develop children's metacognition and higher level of thinking.

In many studies, concerns arise with regards to teachers' levels of confidence and ability to integrate ICT into children's learning (Bolstad, 2004; Gilbert, 2005; O'Rourke & Harrison, 2004; Siraj-Blatchford & Siraj-Blatchford, 2003). Bolstad (2004) agreed that teachers play a crucial role when integrating ICT.   The studies clearly highlighted that some teachers are overwhelmed with the notion of using ICT in young children's learning (Siraj-Blatchford & Siraj-Blatchford, 2003) while others stay well away due to their low level of confidence and abilities (Bolstad, 2004).

2.7. Faatekonolosi ma le Puleaga /ICT and management

Hatherly (2009) pointed out that ICT devices definitely require a different budget, as ICT usually has an average lifespan of approximately three years before replacement compared to a wooden block with very low maintenance that could last a life time.

Within the literature concerns arose with regard to teachers' levels of confidence to integrate ICT to enhance children's learning (Bolstad, 2004; Gilbert, 2005; O'Rourke & Harrison, 2004; Siraj-Blatchford & Siraj-Blatchford, 2003). The same goes for the few Pasifika early childhood teachers that participated in the project for the Smart Strategy in the Manukau area (COMET, 2005). Literature (Bolstad, 2004; Hatherly, et al., 2009) outlined the need for early childhood education teachers to have more guidance and opportunities to become capable, competent, and informed about the educational role and potential of ICT in their services. Weaving ICT and its culture in early childhood education studies at University level would grow teachers' confidence and skills while debating culturally appropriate pedagogical practice.

2.8 Aotelega/Summary

A brief history of Pasifika and Samoan people in Aotearoa were included to contextualise this study. The chapter highlighted the growth Pasifika with Samoan as the largest Pasifika group in Aotearoa. The growth of Aoga Amata as stated in the 2013 Census is outlined. The chapter examined the notion that ICT has transformed the way people today live, communicate and preserve knowledge. Nevertheless, people are sceptical about ICT in Aoga Amata due to the western design and the notion of individual learning. ICT is seen as the window into the world of knowledge where children are capable of manipulating such tools to convey or retrieve information. The literature argued that ICT is here to stay and that teachers must reflect, be active, stay alert and have an open mind when working with ICT in Aoga Amata / ECE.

There is a call for *Te Whāriki* (MoE, 1996) curriculum to be revised in order to include ICT literacy, pedagogical approaches and theory for effective integration of ICT into ECE. *The Foundation for Discovery* (2005) framework outlined pedagogies which teachers can apply when integrating ICT into their programme. Included in the chapter is the notion of so'oatulau (continuum) which is emphasised in the Taiala Samoan curriculum. Contemporary, ICT features in all area of our lives, therefore, it is vital to support children's learning regarding ICT devices and software for the sake of understanding what is in their world. ICT is a tool that can support the philosophy of Aoga Amata. Plowman and Stephen (2005) found the computer useful when communicating with children who did not speak or were unable to understand English. It is these ideas that make this research so important.

CHAPTER THREE Sailiala /METHODOLOGY

Fa'atomuaga /Introduction

Diverse methodologies and tools have been used to research people, their culture and languages from many different perspectives. Methodologies play a crucial role in gathering data for any research whether conducted by an organisation or an individual. Knowledge of methodologies, methods and ethical procedures are crucial to understand as different methodologies and methods should be utilised to suit different research (Smith 1999) and is contained in this chapter.

This study has gathered data that explores views and captures the voices of Samoan-born teachers about ICT and its benefits and challenges for Aoga Amata. This was done by employing qualitative and talanoaga as methodologies with soalaupule groups and talanoaga sessions as methods. The data collection was gathered through Samoan language as this language was the one in which participants were more comfortable with. The researcher's fluency in Samoan language and knowledge of values in the culture was an advantage and most useful in exploring Talanoa as methodology and soalaupule as a method to obtain rich data. The insider/outsider perspective comes to mind as "being an insider for this study is a privilege as I will have a greater understanding of the culture and through that connection comes harmony and honesty in our collaborative sharing" (Bonner and Tolhurst, 2002, p. 8). The disadvantage would be the struggle to balance different roles or making decisions on sensitive information that might be received. With that in mind, an advisory group was established to offer support when faced with such difficulties during the study. "While no one can claim to fully understand the inner thoughts of another person, when we collaborate with our participants" we (researchers) are "obligated in our work to do everything we can to further our understanding of others'

perspectives, at least as one human being to another who shares and similarly embodies emotions such as pain, love, fear, hope, and despair" (Farrelly & Nabobo-Baba. 2014, p.5).

3.2 Qualitative methodology

This research adopted the theoretical work of qualitative data gathering which is a multi-method in focus, and involves interpreting the data in naturalistic contexts, because this was the most appropriate way to discover the Samoan teachers' stories. Qualitative methodology involves conducting any study in natural settings with an attempt to make sense of the interpretation (Denzin & Lincoln, 1994). Natural settings include places that are familiar to the participants. The data collection process was conducted in the AUT University South campus which the participants are familiar with, either through their personal study, or attending SASASIA (Association for Samoan Preschools in Aotearoa) conferences and symposiums.

Adopting the qualitative methods enables this study to address the research question by exploring and gathering data on how ICT is actually lived, experienced, and understood in Aoga Amata. Use of qualitative methods brings together information needed to provide an in depth picture of ICT and its position as well as its use in Aoga Amata. The qualitative approach is about understanding situations in their uniqueness as part of a particular context hence the use of this methodology to investigate the matter at hand (Patton, 2002). Qualitative research can be about gathering information with the people for the people, which is what Talanoaga methodology emphasises, especially when conducting research with Pasifika people.

Qualitative and *talanoa* methodology "strives to capture the human meanings of social life as it is narratives of lived experiences that understood by the research participants" (Gay & Airasian, 2003, p. 163). This allowed me to explore the narrative of Samoan teachers in a non-stressful setting where soalaupule and talanoaga methods captured participants' stories for this study. As an emergent researcher, the challenge began when setting off to talanoa with my own people due to expectations of, and obligations to, my own people (Cresswell, 2001).

3.3 *Talanoa* methodology

Talanoa is a well-known concept throughout the Pacific which happens when two or more people come together to converse either in formal or informal settings (Utumapu, 1998). *Talanoaga* is effective when people physically get together to share experiences and stories as non-verbal communication cues usually accompany any talanoaga with a sense of humour. Effective and geninue *talanoaga* occurs when people converse in a language well known to all in order to fully express feelings through tone of voice, gesture and the level of information shared (Manu'atu, 2000).

Talanoa according to literature is an appropriate methodology and method when conducting research with Pasifika people for it incorporates the art of telling stories and requires an establishment of a meaningful relationships between researchers and their participants (Kolone-Collins, 2010; Manu'atu, 2000; Vaioleti 2003;). In contrast *talano*a can also demand ones attention depends on the occasion or the tone of voice used. For example: *sau ta talanoa* (come, let us talk) conveys that there will be an opportunity for one's voice to be heard. *Sau e iai le mea lea ou te fia talanoa ai* (come I have something I need to talk with you about) conveys that there might not be an opportunity for one's

opinion to be heard. From a Samoan perspective talanoa can also be seen as a one way conversation depending on the context one uses and apply the concept.

Nowadays ICT brings other dimensions of *talanoaga* as people no longer need to be in one place to converse or conduct a conversation due to devices and software such as telephones, mobiles, the internet, Facebook or email. In research today, *talanoaga* opens up conversations between researchers and participants and brings together ideas and possibilities as people share stories and experiences (Vaioleti, 2003; Otsuka, 2006; Manu'atu, 2000; Prescott, 2008). Meaningful *talanoaga* comes from establishing good relationships and connections with a language and culture that brings participants and researchers together (Manu'atu, 2000).

Talanoa is seen by Pasifika researchers as an ideal approach to converse and connect with Pasifika participants for it encompasses the notion of cultural sensitivity and respect for people. Vaioleti (2003) applied the *talanoa* concept as an approach while working with Pasifika people emphasising that talanoa removes the distance between researchers and participants when meeting face to face (verbal interaction). While talanoa can also be informal where chatting enters into conversation, there is a formal aspect of talanoaga where people become involved in deep meaningful conversations regarding a particular matter. *Talanoa* brings another level of connection when people become known to one another as they share stories, humour, emotions, and critical views of the world at large (Kolone-Collins, 2010). Talanoaga is more effective when people meet in person, where alo mai, alo atu (meetings of faces) matters. For Samoan people *talanoaga* varies from casual conversation, the sharing of narratives to a more complex level of talanoaga known as *soalaupule.* The concept of *soalaupule* comes to the surface when the need to find a way forward or solutions to matters at hand arise. The *soalaupule* concept is adopted as

a method in pursuing this research to open up channels of communication and encouraged talanoaga for a way forward.

3.4 Soalaupule method.

The key principles of the soalaupule method include teu le tuaoi. This is described by Tui Atua (2009b) as 'neatness' space, 'betweeness' of peoples i.e. a way of being together, and *va fealoaloa'i* which is mutual respect between researcher and participants. Dr Laumua Tunufa'i and Lealiifano Albert Refiti both speak of imbedded protocols such as "strict guidelines and rules between elites and the manner of the debate where talanoaga opens between generations to get a wider voice rather than that of the elites" (personal e-mail communication 29 November 2013). Soalaupule is complex because of the manner of this forum, where truths and laws of sorts enters, not opinions, for consensus to be sought. Matters discussed are considered not laughing matters where talanoaga allows casual chit chat and opinions to surface. Kolone-Collins (2010) in her study of fagogo as a pedagogy in educating Samoan children outlined in her use of the talanoaga methodology the various levels of talanoaga where soalaupule is at the highest and most complex level as opposed to casual conversation. This is because soalaupule is a process where "authorities shared to seek consensus" (Kolone-Collins, 2010, p. 34). Collaborative discussion is crucial in soalaupule (Utumapu-McBride, et al., 2008) as it allows participants to share their knowledge and experiences collaboratively as well as making decisions.

Soaluapule has three components (soa/lau/pule) that can be used separately in a sentence as each contains a different meaning; nevertheless, together they provide a powerful message that Samoan people understand when they gather to discuss matters. *Soa* literally means partner, in twos and the notion of peer discussion in small and large groups are

emphasised. *Lau* means you or your where the notion of individual knowledge and voice becomes crucial (Tagoilelagi-Leota, personal conversation, 20 Feburary 2012). The rights of the individual participant to be heard and contribute to the collective decision highlights equality and inclusive practice. *Pule* means authority or the right to share. *Pule* (authority) may include showing individual rights in terms of responsibilities one holds. The combination of those words formed soalaupule and can be translated and interpreted as sharing your authority with one another (Tuisuga-le-taua, 2009). The sharing may involve rigorous deliberations, giving, conferring, and the delegation of one's authority to another. Applying this method to the study conveys that participants will know of their rights to take part, to share their truths and to be heard.

Wood (2008) reported how the mental health sector adopted *soalaupule* to empower teams to proactively take part in the proces of decision making and contibuting to collective review. It is similar to the process that Ritchie and Rau (2008) called 'co-theorising' where participants can also contribute to the analysis of the data. The soalaupule process requires reaching and making decisions at a high level of interpersonal communication including, problem solving skills with the people, for the people and by the people (Utumapu-McBride, et al., 2008). Through the process of soalaupule the collective voice can "validate or refute information [with the idea to] …"seek direction and probe deeper levels of information [that can] …"lead to specific patterns and themes" (Lane, McKenna, Ryan, & Fleming, 2001, p. 45). Waldegrave (1999) highlighted that careful consideration is a must when choosing participants with the ideal number of six to twelve participants. As a first time researcher, I found six people enabled me to guide discussion in a respectful manner. The reasonable size of the soalaupule groups and talanoaga sessions allowed participants to citically discuss and debate their multiple perspectives which prompted deep insights to their lived expieriences.

The soalaupule method allows space for consultation, collaboration, debates, questioning and critical discussion. Pasifika education research guidelines (Anae, et al., 2001) emphasised that collaboration and consultation are crucial process in the development of any study with Pasifika people. Collaboration and consultation with Pasifika people can achieved rigor and trustworthiness of the research data. Establishing a positive and close relationships will strengthen the "research partnerships, clarification of research topics, identification of the most useful research design methods, the resolution of contentious issues and the maximisation of the various potential benefits of the intended study" (p. 19). The foundation of a good relationship begins in one's *aiga* (home) where an individual learns to first communicate and apply values such as fa'aaloalo (respect), alofa (love) and tautua (service) (Utumapu-McBride, 1998). The aiga is also the place where they apply principles such as *loto maualalo* (humility), *feagaiga* (agreement) and *fa'asoa* (good judgment), all of which applies in the process of soalaupule (Tui Atua, 2009b).

3.5 *Talanoaga* method

Talanoaga derives from the work talanoa. The '*ga*' in *talanoaga* represent the pural form that encompasses the notion of *soa* (in pairs or in twos). *Talanoaga* incorporates the art of telling stories and requires meaningful relationships between peoples such as researchers and their participants (Kolone-Collins, 2010; Manu'atu, 2000; Vaioleti 2003). *Talanoa* or *talanoaga* therefore is a method that has been used widely in academia and is seen as an appropriate method when researching educational and social issues of the Pacific people (Vaioleti, 2003).

I was mindful of the nature of *soalaupule* and that group discussion capitalises on sharing and building upon the creation of new ideas but may not always capture each of the

participant's viewpoints in full (Hancock & Algozzine, 2006) due to the size of a group. Therefore *talanoaga* session *tai toalua* (peer discussion-similar to paired interview) was in place to allow for casual conversation and humour while capturing the wider view of individual participants. *Talanoaga* in pairs created a dynamic process where participants interacted with one another in a way which they could validate differences in working practices and terminology (Barker, 2005). The method offered participants comfort and relaxation during discussion due to the smaller number of people involved in the discussion (Lohm, 2008).

Talanoaga in a research context is about transmitting forms of oral information between people and can involve multiple dimensions through fagogo (story telling), questioning, reflections, observation and even gossiping (Nabobo-Baba & Farrelly, 2005). *Talanoag*a in Samoa is a method that is trustworthy and relevant within Samoan and Pasifika communities because of the *alo mai alo atu* (face meeting face) that will create meaningful engagement between people (Otsuko, 2006; Vaioleti 2003). *Talanoaga* and *soalaupule* methods are appropriate for this study of *sailitofa* (in search for wisdom) for Samoan teachers and Aoga Amata.

3.6 *Tofa fa'asoa /*Data Collection

Data was collected through three *soalaupule* groups and three *talanoaga* sessions. A series of group discussions and face to face *talanoaga.* Figure 4 depicts the relationship between the research questions and the methods selected to answer the research questions. The analysis of the findings was discussed in a final *soalaupule* session.
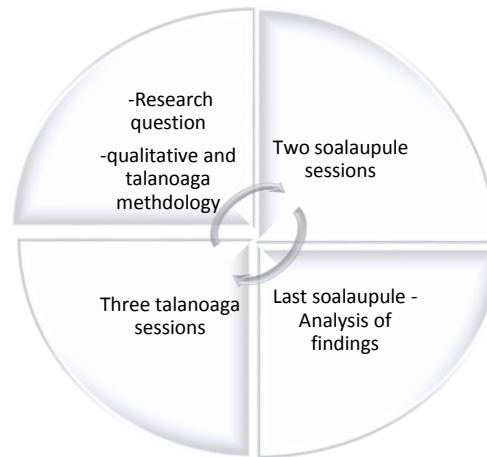
Figure 4: Relationship between Research Question and Methods
(Kesi, 2014)

3.7 O latou na fa'asoa le tofa/Participants

I have employed the snowball approach to recruit participants for this study (Bell, 1996). This approach invites current participants to use their networks to find further participants. ICT creates tension in Samoan gatherings and is therefore not a topic likely to be found in group discussions, hence the appropriateness of the snowball method in the recruitment of participants. The chain referral method suited this study for there are Pasifika/Samoan people who are interested in studying this area. Through the snowball method participants were chosen from those who showed interest in this area of study and those who demonstrated willingness to participate in the research. ICT is not a topic that you will come across in Samoan people's everyday discussion; therefore, I was fortunate enough to meet these Samoan-born teachers with similar interests and connection to my interest area of research.

The teachers who participated in this study are Samoan-born women aged between 30 and 70 years of age. The participants are not just early childhood teachers but mothers

and grandmothers themselves who are well respected individuals within the current Samoan context. The participants migrated and lived in Aotearoa between 10 to 50 years ago to give their children and grand-children a better future. Each has experienced the influence of ICT in their profession as well as in their personal lives. Opportunities presented in the land of Aotearoa provided them with a chance to take up Tertiary studies which lead them to early childhood education and employment in Aoga Amata. Total Immersion Aoga Amata employs Samoan teachers who can speak the language fluently and who are rich in their cultural knowledge to support and maintain the philosophy of Aoga Amata in Aotearoa. This created employment opportunities for many mature Samoan-born who migrated to New Zealand. Mature Samoan-born teachers make up the biggest number of teachers in any total immersion Aoga Amata in Aotearoa hence the decision for this selection of participants to take part in this study.

In order to gather a significant yet manageable volume of data, the number of participants was limited to six. Hargreaves (1996) outlined the importance of "an even sufficient number and range of voices selected to raise issues of contrast and difference among teachers" (p.16).

Soalaupule groups was organised for the higher level of talanoaga and discussion with people who share some common characteristics (Waldegrave, 1999). This research employed three soalaupule groups with the idea of collaborative work where participants are involve not only in the discussion but in the examination of the data collection. Similar to a focus group, the aim was for people to come together as a team and proactively take part in the study (Wood, 2008). Six Samoan teachers from five centres were approached and came together to "validate or refute information" with the view to

"seek direction and probe a deeper level of information" that can "lead to specific patterns and themes" (Lane et al., 2001, p. 45).

Understanding the protocols of such a group led the study to have three soalaupule. The first soalaupule group gave participants time and space to overcome their anxiety and a chance to get to know the researcher and other participants. The second soalaupule was conducted after three talanoaga sessions with the focus on circulating the data for discussion for the purpose of *tofaliuliu* (reflective wisdom). The third soalaupule was a chance for participants to revisit the data for discussion with the focus on clarifying and validating the rigor of the collected data. The notion of multipule phase, and multiple layers or levels of conversation highlighted during this process which repetition or deep thinking can be identified. Talanoaga sessions were also in place to provide a balance for casual conversation and for humour to enter the conversation with narratives that could capture wider experiences. Both soalaupule (see Appendix A) groups and talanoaga sessions had key questions (see Appendix B) to guide discussion, however, openness was considered to bring about flexibility (Mutch, 2005).

The participants all have in common their interest and passion relating to the research topic. There are not many in the field of Aoga Amata who can say they have an interest in ICT or digital technologies due to the alienation of those tools in our culture. Because of this, the snowballing method for the recruitment of participants is appropriate. The Aoga Amata directory and the researcher's own network of SAASIA were in place in case there was a need for participants. Samoan people will typically support and take part in activities because they know the people or a person involved.

The participants for this research are mature Samoan teachers, born in Samoa and are working in total immersion Aoga Amata (Fa'aSamoa) in Aotearoa New Zealand. Six Samoan teachers have come from five Aoga Amata for the first time to share their views and philosophy for the sake of affirming their practice and to contribute to the notion of ICT for Samoan families and children in Aoga Amata centres.

Understanding the Samoan culture and tradition gave me an insight into how the participants should be approached. In the Fa'aSamoa (Samoan culture) *e le tutusa ma talafeagai tagata matutua ma tamaiti* (children / young people are not equal to adults) and having that knowledge allowed me to approach the research and my participants with fa'aaloalo (respect) and loto maualalo (humility) (Tui Atua, 2009). Soalaupule methodology allows space for collaboration; establishing relationships and making connections with participants. Fontana and Frey (2005) discussed the important decisions researchers face when they present themselves to their participants stating the importance of making an impression for a positive successful outcome for the study. Establishing and maintaining positive relationships is an important part of talanoaga and soalaupule, and the *alo mai alo atu* (face to face meetings) encourage strong connections.

Soalaupule groups and talanoaga sessions were conducted at the new Manukau AUT campus as it provided a feeling of being at home (in the Island) due to its greenery which therefore produces a feeling of belonging as stated by many of the Pasifika students who are currently studying in the campus. The rooms were new and fresh with comfortable seating that can be easily arranged to create a feeling of coming together as a group for a discussion. As participants came straight from work to meet, I set up dinners for the entire group with hot and cold drinks available for them to enjoy when needed. Each session

was blessed before and after our discussion as the normal protocols for a Samoan gathering.

In our first Soalaupule group, Wednesday was the day agreed by participants to meet at set times. The first soalaupule group was therefore set up on the 8th of June at 6pm, all participants attended. Our fono (meeting) took longer than planned due to introductions and getting to know one another.

A few challenges arose such as participants having to come from a board meeting or a staff meeting. This delayed the start and pushed our finishing time later and later in the evening. Nevertheless, participants felt comfortable and relaxed on the night. They were also empowered to choose their partner (soa) for talanoaga sessions that followed. Having six participants meaning three talanoaga sessions (in pairs) needed to be in place and participants were able to group themselves. The second soalaupule group was set up after talanoaga sessions to revisit experiences shared during talanoaga sessions. With that in mind the notion of circular discussion surfaced as participants spoke of topics with layers of meanings and contexts. The last soalaupule meeting focused on the data collected where participants were able to discuss, add and contribute further.

3.8 O vaega faufautua/Advisory group

The advisory group played a vital role in this research to bring about confirmation and awareness of an ethical approach to each aspect of my study. On various occasions we met for discussion and guidance to ensure a robust study (Jenkin, 2005). Consultation is a crucial process in the development of any study that includes Pasifika participants as this can lead to the development of research partnerships, clarification of research topics,

identification of the most useful research design methods, the resolution of contentious issues and the maximisation of the various potential benefits of the intended study (Anae et al., 2001). The advisory group consists of one academic early childhood Samoan teacher, one community Samoan early childhood teacher and one academic lecturer with ICT background in early childhood. Discussions were aimed to clarify concepts used and processes of this research such as data collection.

3.9 Fa'avae talafeagai ma tofasaili /Ethics

Ethical approval was sought as procedure must be in place for any research to protect both participants and the researcher with the view to respecting participants' rights, honouring the research environment and providing honest data (Cresswell, 2001). Seeking ethics approval has become an essential practice in academia and research areas especially when working with people (Jenkin, 2005). Seeking such procedures will demonstrated one's ethical practice around maintaining privacy, seeking consent and protecting participants from harm (Jenkin, 2010). Before data collection, gaining the participants' trust, confidence, respect and consent was a crucial stage of the whole process (Bell, 1999; Mutch, 2005).

The research recognises the relationship between Pasifika in particularly Samoan people to the Tangata whenua of Aotearoa and the Crown. The designing of the research acknowledges that Samoan teachers from Aoga Amata and the researcher are in partnership in constructing Samoan knowledge in the area of ICT.

The Information Sheet (see Appendix C) and Consent Form (see Appendix D) were provided as a platform for a "partnership that needed to be carefully negotiated before

starting" (Davidson & Tolich, 2003, p. 55). The guidelines for the process were set up with the participants in the first soalaupule session. They were made aware if issues arose that names of colleagues and of centres remain anonymous. The importance of having respect for each other's expertise and ideas during the large and paired discussion groups was emphasised.

Partnership was about informing people beforehand about the nature and process involved in any study. Partnership was also about allowing people to contribute in areas of their interests as well as respecting their decision to withdraw their consent with an agreement on a time frame to determine a robust collection of data.

The research was designed to include Samoan people's voices as a contribution to matters that are arising within the education system of Aotearoa. The study contributed to the raising of achievements in education for Pasifika/indigineous people. The Treaty of Waitangi guarantees protection of the mana of those taking part, and that data is shared, acknowledged and used appropriately according to the purpose of this study (Jenkin, 2010). Participants' identity and privacy are protected in this study which was reinforced by signed consent from all participants before any data collection took place (Davidson & Tolich, 2003). An informal fono was called for the participants to inspect the final thesis and to extend my gratitude to the teachers who participated.

3.10 Aotelega/Summary

The talanoaga concept is a known methodology and method in a research area when working with Pasifika people. This study introduces the soalaupule concept as a method

to accompany talanoaga, where participants can be fully engaged with both heart and mind to reach a richer and more fulfilling outcome from the gatherings.

It is a method that enables participants to feel empowered to contribute actively to the overall results of the study. In spite of the lack of published research done in this particular area, I found as a Pasifika researcher that this approach was highly effective both for the participants and for the outcome I was searching for in the study.

CHAPTER FOUR *Sailimalo* / FINDINGS

4.1*Fa'atomuaga* / Introduction

The study documents a growing understanding of ICT in early childhood but specifically in Aoga Amata preschools. Drawing from the data, this chapter brings forth the common themes that highlight voices of Samoan-born teachers in search (*saili*) of their wisdom (*tofa*) to understand how ICT is viewed and implemented in Aoga Amata. The Pasifika Education Research Guidelines (Anae et al., 2001) emphasised that language should not be an obstacle to Pasifika participants in any research context. With the same thought in mind the s*oalaupule* and talanoaga sessions were conducted in the participants' first language to avoid obstacles and to capture authenticity in teachers' talanoaga (sharing/narratives). Conducting this research in the Samoan language pays tribute to the meaning of *saili le tofa* and *soalaupule* concepts as both terms seek authenticity of the participants' contribution to maintain integrity of the data. Talanoaga and soalaupule with participants are followed by the English translation so to be accessible to non-Samoan speakers. Samoan is my first language and was introduced to English in my few months of college and afterwards when employed by Bendon Industrial around the age of 16 years old. As a fluent speaker I felt competent to complete the translation from Samoan language to English.

The *soalaupule* method acknowledges shared collective voices in a circular manner where participants revisit their experiences in a collaborative and reflective approach. Similarities are woven through themes as a result of the multipule layers and levels of information shared by participants'. The data highlighted participants' perspectives, concerns and challenges with the aim of bringing about awareness of ICT and its

influence upon children and families with whom Samoan teachers work today not only in Aoga Amata but in early childhood as whole.

The collected stories and lived experiences highlighted in this chapter is the result of participants' *tofa* (wisdom) that was *saili* through *soalaupule* groups and *talanoaga* sessions. This is outlined in two parts. The first part describes characteristics of participants while the second part focused on the main themes that emerged from the data analysis. Pseudonyms are used to prevent the identification of participants as agreed by all who consented to take part and this was emphasised in the first soalaupule discussion. Nevertheless, a brief account shared by participants follows as a way to contextualise their position as participants for this study.

Table 1 A summary background of participants

Participants	Length of time in NZ	Years of teaching in Aoga Amata	Position held during this study	Qualification	Age	Area of work
Tasi	39-41 yrs	5-10 yrs.	Supervisor	Bachelor of Education ECE Pasifika	60-65 yrs.	0-5
Lua	12-14 yrs	5-10 yrs.	Assistant supervisor	Bachelor of Education ECE	35-40 yrs.	2-5yrs old
Tolu	23-25 yrs	15-20 yrs.	Teacher	Diploma of ECE Pasifika (level 7)	50-55 yrs.	0-5years
Toafa	37-39 yrs	15-20 yrs.	Teacher	Graduate Diploma Education	55-60 yrs.	0-5yrs old
Lima	35-37yrs.	20-25 yrs.	Centre manager	Bachelor of Education ECE	40-50 yrs.	0-5 years old
Toaono	38-40 yrs	15-20 yrs.	Teacher	Bachelor of Education ECE	55-60 yrs.	6mnts – 5yrs

Tasi was over 60 years of age at the time of this study which made her the oldest participant. Nevertheless she is young at heart and full of energy. Tasi graduated with a Bachelor of Education ECE Pasifika and holds a full teacher registration to date. She has worked over 5 years in mainstream centres and 3 years in Aoga Amata. Tasi spoke with excitement when she shared narratives about her children and grandchildren who were her reasons for entering the early childhood profession.

Lua was over 35 years of age at the time of this study and the youngest of the participants. She graduated with a Bachelor of Education ECE and has taught in Aoga Amata for over 5 years. Lua speaks highly of the work they do with children in her Aoga Amata and professes astonishment in seeing the amazing work that children create when they are working with ICT hardware and software. As an assistant supervisor she shares her knowledge of ICT with staff and inspires them to reflect and take note on how they can best integrate ICT into their programme.

Tolu was over 50 years of age during this study. She spoke of overwhelming moments when she first worked with ICT during her University years as a mature Samoan student.

> *...e ese le faigata o le faaogaina o le computer, printer ma le internet i le taimi o la'u aoga. Ou te tagi i isi aso ao ona o lo'u popole ma lo'u fefe nei tei ua leaga le masini ae lei uma na ta le galuega e ave. Ua ou laki lava ina ua fai lau pepa o le computing level 2 ua ou mafanafana ai i le fa'aogaina o le computer ma le printere fai ai au learning stories* (Tolu. Soalaupule1.08/6/11).
> … I found it difficult to use the computer, printer and internet during my study. Some days I cried because I worried and was scared because I wasn't sure of what to do or that the machine might break before I completed my work. I felt very lucky after my study for it prepared me to use a computer and printer for my learning stories.

Tolu graduated with a level 7 Diploma of Teaching Pasifika ECE and has worked in Aoga Amata for over 15 years.

Toafa holds a Graduate Diploma of Teaching and a full teacher registration. She was over 55 years of age at the time of this study. Toafa spoke of her children's use of computers as a treat or as a babysitter to keep her grandchildren busy or quiet. Toafa encouraged teachers' of Aoga Amata to further their knowledge of ICT for the sake of children and their families. As a grandparent herself she sees teachers as a source of information for parents and grandparents regarding ICT and young children.

Lima was over 40 years of age and worked in Aoga Amata for over 20 years during the time of this study. She encouraged teachers to enhance children's potential by preparing themselves well for the task at hand. Lima encourages integration of ICT in adult studies in order for teachers to have full potential to weave ICT effectively in all aspects of Aoga Amata.

Toaono was over 45 years of age and holds a Bachelor of Education degree during the time of this research. Toaono testified to the impact of ICT in her Aoga Amata as well as in her home with her children and grandchildren. She believes teachers are the key people that can open up discussions with children, families, parents, grandparents and the governance and management bodies.

Participants are experienced qualified teachers. They have shared *tofa* (knowledge and wisdom) from their rich lived experiences which informed a thematic approach that follows and opened up discussions around their view of ICT and its implementation in their Aoga Amata in Aotearoa.

4.2 Emerging Themes

The chapter is set to put forth participants' voices first and foremost in their own mother tongue followed by the English translation to allow both Samoan and non-Samoan readers to construct their own understanding and meanings (Waller, 2005). The findings which I will recount next are only a snapshot of participants' views of ICT from their lived experiences. The narratives obtained through soalaupule groups and talanoaga sessions will be a small contribution in growing a body of knowledge in ICT for Aoga Amata in Aotearoa New Zealand.

The collected data was grouped into themes to better understand the large amount of information received. The soalaupule and talanoaga sessions were transcribed and coded using coloured post-it notes. The process allowed easy access to group information, further and advanced the examination of data analysis using word processing software to reorganise data with tables, graphics and colour coded information. Sifting through the data in such a way allowed repeated interpretation of responses to surface which led to the unfolding of themes and sub-themes identified in this work (Jenkin, 2010). The themes were closely related to questions documented for soalaupule and talanoaga for the sake of maintaining a focus on the topic at hand. The themes were arranged as follows:

1. ICT Perceptions

2. ICT Usage

3. ICT Challenges

4. ICT Awareness

The ICT perceptions theme outlined participants' view of ICT from their lived experiences. The ICT usage theme highlighted how the participants integrated ICT as a tool of communication and pedagogy in their teaching. The ICT challenges theme outlined the reality of what participants are facing regarding ICT. Lastly the ICT awareness theme conveys teachers' perspectives around the ethical use and the impact of ICT on the philosophy of Aoga Amata.

4.2a: *Tofa faaalia* /ICT Perceptions

The Ministry of education defined ICT as Information Communication Technology (ICT) known as electronic devices powered by electricity and accompanied by software to enhance communication networks for humankind's purposes. When participants were

asked about how they viewed ICT they first described the notion of ICT in their fa'aSamoa as *aupega* (tools), *alagaoa* (resources) and *masini* (machines) powered by any form of electricity with the purpose of retrieving and/or communicating information. Participants further stated their perception of ICT by making connections to their upbringing before highlighting advantages and disadvantages ICT provides.

Participants outlined the need for Samoan words to described ICT and therefore began by sharing what is already known to them. Lima stated that we can use words such as aupega (tools), masini (machines) or alagaoa (resources) to describe ICT in Aoga Amata. Toafa reminded the group of how rich and complicated the Samoan language is and the need for Samoan elders and Linguists to pay attention in this field if we are to continue growing our language and culture in this technological world. Toafa stated:

> *..o le matou aoga o la e fa'aoga le upu masani lava na fa'alogo ai o fa'aoga e isi foi aoga e pei o le masini fa'anei ona po, ia poo le masini fa'atekonolosi, ae a fa'apea o loo talanoagaina le ICT o le computer ia ua tau o le komiputa poo le masini alu uila. O digital camera o mea pue ata. O ICT o masini alu uila, poo se alagaoa, poo le masini fa'atekonolosi* (Toafa.soalupule 1.8.6.11). In our centre we use the common words that we hear from other Aoga Amata like masini fa'anei ona po (machine of today), or masini fa'atekonolosi (technology machine) but if we are talking about computers, its komiputa (computer) or masini alu uila (machine operates on electricity). Digital cameras are what we called mea pue ata (camera). On the other hand ICT are machines that operate on electricity.

Participants identified the natural environment as the type of technology that they grew up with together with equipment used for fishing, tools for building canoes and houses they compared to technologies and tools available today.

Toafa stated:

> *...o toeiina ma loomatutua i Samoa e fa'aoga le natural environment e fesootaiai ma mea e tutupu i le siosiomaga. E ese le tomai e interpret le agi o le savili, tagi o se manu, pupula o fetu, poo le iila o fetu ma lanu o laulaau mo vaaiga o le tau faapea foi le tu o le la mo le tauina o le taimi... O nei aso ua na o le ki o le leitio, telefoni feaveai, tv poo le computer e vaaia ai le tau ma le taimi (*Toafa.soalaupule 1. 08/06/11). Our elders in Samoa used their wisdom and connection to the natural environment to convey what might or could happen. They can interpret how the wind blows or the cry of a particular bird, the shining starts or colours of leaves

to determine the type of weather they might have and the position of the sun to tell time Nowadays, people turn to the radio, TV, computer and mobile phone to view the weather and time of the day.

Participants agreed on some of the technology without electricity that Samoan people used effectively for their purposes and communication. The notion of the bell for example to inform people of a particular purpose such as attending church. The foafoa (conch shell) when heard in the evenings, Samoan people obey the sacred message that carries throughout the whole village. Toaono supported this by adding:

> *… e leai ni telephone ma ni mobile ma ni computer i aso ia na ta ola ai i Samoa ae sa iai tatou logo… e ta mai loa o ta iloa ua oo I le taimi o le lotu. Faapea foi ia fofoa, a ili mai loa le pu ua vavex2 le savali i le fale mo le faiga lotu ma le aiga. E moi e lei iai ni tekonolosi alu i le eletise i na aso ae sa iai lava tatou aupega poo tekonolosi taua sa iai i lena vaitaimi (*Toaono 1. 8/6/11). We didn't have telephone, mobile, computer when I grew up in Samoa but we had bells… when it rings we know it's time for church. We had the sound of the conch shell when it's heard we know that we should be home for family prayers. Even though we didn't have technologies that run by electricity, we had our own technology fit for our own purposes during those times.

Conversely participants noted the change in how people receive and communicate information to each other due to the vast change in technologies today. ICT therefore is noted as a window into the world of knowledge which will be further explored in the discussion chapter.

> *...o ICT nei aso ua pei o se faamalama o fesootaiga i soo se vaega o le lalolagi. Ua tatou iloa mea o tutupu i le lalogi atoa mai le ki ina lea o le TV, computer ma le internet, faapea le leitio...* (Tasi.talanoaga.1.29.7.11). ICT these days is like a window of knowledge into the world. Now we can see what is happening around the world by turning on the computer and internet, TV or radio those are technological resources that we have today.

Furthermore participants identified the fast transportation of messages and information across the world through the use of ICT hardware and internet available today. ICT, therefore, is seen as another tool for teaching young children taking into consideration their short span of interest and attention

Toafa explains:

*...o computer ma le internet ua faigofie ma vave ai fesootaiga e ala i le faaogaina
o le telefoni feaveai, email, Facebook ma le skype. Ua faigofie ai ona faisuesuega
ma tamaiti ma feso'otai ai ma aiga i soo se vaega o le lalolagi. E moi e iai vaega
e fa'aletonu ai le ICT, ae o le ala lea o fonotaga faapenei e faatalanoa ai ala e
aoaoina ai le fanau* (Toafa.soaluapule 1.8/6/11). Communication with families
around the world and extending children's learning in areas of their programme
has been made easier and faster through computers, internet, mobile phones,
email, Facebook and skype. Agree there are disadvantages that we can't ignore
when it comes to ICT but that is the purpose of forums such as this, to discuss
how we should teach and deal with those disadvantages.

Participants identified the need for teachers to open up discussions regarding the use of
ICT devices as they identified both advantages and disadvantages for Aoga Amata. Tolu
proclaims:

*Na amata la'u aoga i le Univeseteou te lei tago lava e faaoga se computer aua e
fai lava e tamaiti…ou te faafetai lava i lau aoga i le Univesete ua ta iloa ai create
phamphets ma brochers pe a fai matou parents evenings faapea le download ina
o ata mo a'u portfolio. E manaia pe ana iai se isi matou vasega e i luga ifo e
faalauai tele ai le matou iloa ile faaogaina ma le aoaoina o nei masini i totonu o
Aoga Amata faapea foi totonu o matou aiga (Tolu. Talanoaga 2. 29.7.11).* I have
not used ICT when I started my University studies because my children were
there. … I am grateful to my study because I came out knowing how to create
pamphlets and brochures for our parents evening as well as learning how to
download photos for my portfolios. It would be nice to have another class to
further our understanding of appropriate use of ICT in our Aoga Amata as well
as in our homes.

Lima shared one disadvantage that members of her Board and parents highlighted:

*… ua leaga tusitusi a tamaiti ona ua le tau fa'aogaina le peni ma le pepa a ua
tele lava I le omiomi ina o le computer* (Lima.soalaupule 3.10/10/11).
…children's writing is worse because they are spending more time on computer
than with pen and papers.

This has influenced the minimal set up of ICT devices such as computers in the children's
learning environment. Nevertheless, she outlined that all teachers have their own laptops
which they can easily use when the need arises in their work with children.

4.2b: Fa'aogaina / ICT Usage

Participants shared the use of ICT in their centres. This encompassed both working and non-working devices as Lima pointed out:

> *…e tofu lava matou faiaoga ma laptop aua le faiga o le matou polokalame ma tamaiti. E iai lava cameras mo le pu'e ina o ata ae e iai foi matou masini e le ola sa fa'aoga i la aso ona e fiafia lava tamai e taaalo ai. Pe le ola, e tele foi a le aoaoga e maua e tamaiti, e pei o le identifying ina o mataitusi ma fainumera o loo iai i luga o le keyboard, that's literacy… O matou pepe foi e fiafia tele e omiomi ma tata le keyboard… o lena foi la e fa'amalolosi ai latou fine motor skills'* (Lima.soalaupule 3.10.10.11) all our teachers have their own laptop for programme planning. We also have cameras for photos and non-functional devices, children like to play with those. Children can identify numbers and letters while playing with the keyboard…that is literacy… Our babies also join and press buttons on the keyboard… that is strengthening their fine motor skills.

Participants spoke of the use of ICT for administration which is the main use to which the participants report. All six participants have computers, printers, and digital devices set up for administration work. All participants agreed that having access to computers, laptops, printers and digital cameras enhanced their programme planning and children's portfolios. Nevertheless, only three teachers shared how they integrated computers, internet, and laptops to retrieve further information that supported their observations of children's learning. One factor is the availability of the technology to teachers:

> *…o le matou agoa e leai a ni computers poo ni laptops e galulue ai ma tamaiti. A manaomia foi e leai se taimi ona o taimi uma lava e fa'aoga ai lava e le tagata la e i le ofisa mo le faiga o le paper work. O leisi aso ua le ola, o le sisi aso ua le ai se internet, o le isi aso ua leai ni pepa o le printer ma e uma ai foi le fia galue ma ia masini aua le fa'alauaiteleina o le aoaoina o le fanau e tusa poo le a lo ta fia naunau atu e fa'aoga* (Tasi. Talanoaga 1.29.7.11).At the centre we don't have computers or laptops for teacher's work with children. If I need it there is no time as usually the office person is there doing the paper work. Other days the computer is not working, other times there is no internet, other days there is no paper for the printer and so I give up wanting to use those to support children's learning even if I really want to use it.

The teachers pointed out the lack of having functional devices in the children's learning environment as they identified non-functional devices in their centres. Those in senior positions reminded others of the importance of non-functional devices in children's physical development for example:

...e fiafia lava tamaiti e fa'aoga masini ua le ola ma e le tau vaavaaia foi. Tele o le taimi a le faataitai le tata ia ua faataitai le talanoa e pei o se fomai ma e vaaia pea lava le galulue o tamaiti faatasi e fai latou pretend play. E popoto lava Tamaiti e faaoga masina pe ola pe leai (Tasi. Talanoaga 3.30.7.11). ...children are happy to use the non-functional devices and we don't need to keep an eye as well. Lots of time children use those devices to play pretend typing, or pretend to be a doctor. Children are competent and they know how to work with technologies available to them whether it's working or not.

The early childhood curriculum of *Te Whāriki* (MoE, 1996) highlighted that children are competent and confidence learners (MoE, 1996). Toafa added:

...o aso nei e ese ma le popoto o Tamaiti e fa'aoga ICT masini ua ae mai fa'apea software fou. O ita ta te tau autilo ma tau tagotago ae e tasi lava le tago iai a le tamaititi ae ola ma alu i le atoa. O lau grandchild latou oka se poto nei masini fa'anei ona po e fai ai taaloga. O tatou e tuai ae o tamaiti ua popoto lava ma le fefefe e tago e fa'aoga se masini. (Toafa.talanoaga.3.30.7.11) These days children know how to use even the newest ICT device and software. For me I'm slow and trying to find my way around it but, children, once the child touches it, they know it. My grandchild is so knowledgeable in the use of these machines today. We are slow down the children, they are clever and not afraid to use it.

Integration of functional devices in centres can empower children in their learning, foster trust and further grow an interest for exploration (Oldridge, 2010). Tolu (talanoaga 2. 29.07.11) spoke of children's ability to negotiate and problem solve if given the chance. Working with children over 2's she found them very capable of using the computer and software in their area. She shared that children are confidence learners. She shared an experience in which children worked out how to operate the machine by themselves. The experience builds children's confidence and knowledge of the rules that was discussed. Consistency with rules around the use of ICT must be emphasise and adhere by all staff. Tolu also observed children working closely with their parents as well as problem solving together with their peers with little support from the teachers. Lua supported by adding:

Our children help set up what we have, ICT is very much part of that set up. They know there is always two chairs around our computer area and they know to take turn using strategies that we have put in place (Talanoaga 2. 29.07.11).

There are many programmes and various types of devices in stores today; however, teachers only knew very little of what was available for use and their purposes. When asked about teachers' level of skills in ICT looking at email, Facebook, and Microsoft Word for assessments, six said they have some understanding but still need support. When asked about software that will support children's learning three responded confidently while the other three conveyed little to no knowledge of such software. Teachers noted that even with the limited skills they hold, they tried to be teachers of the digital generation. Lua conveyed:

> *... e leo le tatou fetuunai pe tatau ona fa'aoga computer, laptop, tablet, software, digital cameras, smart board ma isi lava alagaoa alu uila esese... ae o le tatou o mai lea fa'atasi as a team e fa'atalanoa pe fa'apefea ona faa'aoga alagaoa alu uila nei mo le fanau ua fananau mai i le nei vaitau o le tekonolosi. E tatau ona tatou iloa pe aisea e fa'aoga ai, o le aoga, ma lona taua i le fesosoani lea i le tatou galuega fa'afaigoa* (Lua. Soalaupule 2.26.8.11). We should not be asking whether we need to use computers, laptops, tablets, software, digital cameras, smart boards and other devices that are here today but we should come together as a team to collaborative share how we can make use of these devices and software for children who are born in this particular time of technology. We need to know the reason why we use it and its benefit for our work as teachers.

This leads the discussion to how video taken by either video cameras or laptops can be used as a teaching tool as well as sharing children's activities with parents. Participants spoke of integrating videos of the Samoan Independence day, the Teuila and other Samoan cultural activities in their programme where children watch and ask questions as they listen and sing along to songs they have been taught in their centres. This was one way two centres captured parts of children's culture in the islands and watched it with them to support what they will hear at home or in the centre.

> *Taking videos is something that we thrive at doing and our children and parent look forward to check those out when they come to the centre. E iai a la le vaega i le itu o pepe e o mai a matua o loo ola atu ai le masini latou te vaavaai ai i ata fa'apea foi ni matou video o galuega a tamaiti na fai e fiafia lava e matamata ai ma latou fanau. (Fa.soalaupule.3.10.10.11)* ...we also have an area set up in the under 2's area with a computer playing pictures or videos of our work with children. Parents find it exciting to sit and view those with their children.

Participants noted most of their parents today are ICT literate as Tolu explains:

> *…about 90% of our parents are using computer and email even the latest tools*
> *ae e iai na o si fua inumera laitit e leo iai ni computer but o la e tofu uma ma*
> *mobile phone and some ipod ma ipad mo taaloga a latou tamaiti (Tolu.*
> *Talanoaga 29.7.11). About 90% of our parents' have computers in their*
> *homes for their children and have always used email for communication*
> *purpose while a small number don't have computers each have a mobile phone*
> *and some have an ipod and ipad for their children's games.*

Participants shared stories of parents who are also growing their language and understanding of the culture through the children's work that they captured using ICT recordings and digital photos.

4.2c Lu'itau/ICT Challenges:

Participants highlighted the need for management and government support with the use of ICT in Aoga Amata and early childhood as a whole. Some teachers even expressed their excitement at what they are able to use with children today to support their learning and share with parents. However, they continue to ponder over whether they will continue to be supported by current Boards and management. Tolu (talanoga.2.29.7.11) stated:

> *… e ese le manaia o le iai o ata mea totino mo le galuega, e tau le fa'atalitali i le*
> *isi faiaoga poo le ofisa sei clear ona fai lea o le galuega mo le fanau. Ae peitai*
> *o le a le umi e leo ilo ona o le manager pe support ina le fa'aauau pea lea I luma*
> *o lea support. It's wonderful to have your own equipment to work with, no need*
> *to wait for another teacher or the office area to clear up before you start working*
> *for children's sake. Nevertheless, how long for us is not clear as the new manager*
> *might not be very supportive to continue this initiative.*

It became clear that teachers need to be strong researchers if they are to make proposals on how and why management should support the use of ICT in their Aoga Amata. Nevertheless, one issue Tasi stated is not having non-contact time for documentation. '*In our centre we take our work home; our portfolio home and so, when is the time to do that and make proposals for the wonderful things that we can do with children as well as*

upgrading our skills of ICT'. It is clear in the participants' voices that there is a need for a continuation of good practice with ICT if managers and board members have the same vision. The notion of having board members that hold an ECE qualification was favoured by all participants as Tolu summed it up:

> *... e tatu ona iai ni ECE qualification a Board members ona le tau logologo lea o nei mea iai aua ua tatau ona latou iloa. O le galuega a faiagoa e ese le faigata ma e tatau lava ona latou mataala ai i vaega uma e fa'aleleia ai le galuega ae leo le fa'atalitali mai e matou te toe o atu e toe tau atu mea e tatau ona fai.* Board members should have an ECE qualification; we should not be telling them these things as they should already know that is needed to enhance the work in the centre. We should not have to convey what is needed to them when they should know what is it themselves (Tolu.soalaupule 2.26.8.11).

4.2d: Seu le manu ae taga'i le galu/*ICT Awareness*

Participants noted the vital role of governance and management bodies in funding and resourcing a rich ICT environment for Aoga Amata. They noted that ICT will need to be budgeted as programmes need updating and hardware needs fixing. Nevertheless only a couple of participants' centres have some sort of budget in place to ensure hardware and software are updated.

One participant pointed out the impact that members of the Board of Trustees have in her Aoga Amata when it comes to resourcing the learning environment of their children with ICT. Teachers are aware of the need to have appropriate pedagogy for integrating ICT in their programme. One participant in our earlier soalaupule shared how children fight over one computer and as a result the machine is removed and locked away.

Coming together with these participants and sharing their views supported some of the challenges that they are currently facing. Some shared how they had gone about it with the members of their Boards and offered encouragement to the others to continue providing them with evidence with what ICT can do for children's learning.

As a result of this coming together, one participant gained strategies regarding how to manage children using one computer in their centre. She was able to share in our last soalaupule her excitement in having to pull the computer outside again and put some of the suggestions conveyed during our soalaupule in to action.

It was also clear in our discussion that teachers fear the use of ICT due to the need to maintain the usage of ICT that they have in the centre. Participants spoke of their upbringing and how they were taught to not play with expensive equipment. They highlighted that this may also be the reason why other teachers are not integrating ICT in their practice. The two participants who attended computing level 2 during their University studies highlighted that fear can occur from not understanding the function of ICT or/and having the confidence to implement the tool effectively.

> *'Ou te manatua le taimi fa'atoa alu ai i Univesete, lota fefe i lea foi tuaiga setting poo mafai pe le mafai ae ua ova lota fefe ina ua o ta iloa e le mafai ona ave sa ta galuega ae lei type ina lelei… ata…* (Tasi. Talanoaga 1. 27/7/11) I remembered the time I went to university, I was afraid that type of setting whether I can or can't and felt extra fear when I knew that every work I will give has to be typed up…laughter…(Tasi.t.8/6/11).

As mentioned earlier participants view management and Board's role as crucial in providing professional development and time for teachers. Professional development will support the many hats that were worn by the participants. The hats they spoke of are the technician hat, the software developer's hat, the IT savvy hat, the chef hat, the teacher's hat a parent's hat and even an aunt's hat. Professional development with the right attitude to work and use of ICT in Aoga Amata will have a great impact on their work. Participants had pointed out the need for teachers to grow their skills in ICT not just for planning and administration but also the knowledge of how to integrate all their different roles to support children's learning and parents' knowledge of their children's progress.

The ICT Framework (2005) emphasised the appropriateness use of ICT to support the principles and strands of *Te Whāriki* through exploring new strategies for curriculum experiences and working alongside children and families to create age and culturally appropriated resources that will foster and extend children's understanding of their living world. Participants recognised that ICT highlights visual and audio aspects of teaching. They see it as an effective pedagogical tool for teaching young children. Four teachers spoke of songs they sang and recorded, three teachers spoke of photos they revisit and video clips of Samoan culture that they share with children and parents. Participants share also their work with children in building up their Samoan language through visual pictures using computers and laptops as well as current children's software programmes if they have them in the centre.

They can see how ICT as a tool can be used to influence children's understanding of their Samoan culture and language. They responded that ICT can support the philosophy of Aoga Samoa, as it has the sound and visual capacity that children need to understand things in context when we talk about things they have not experienced themselves like Sisiga fua (Independence Day).

Music is a big part of our culture and in Aoga Amata it is a big part of the children's programme and routine. Having ICT tools and programmes allows them to either create new music or listen to music with young ones. Practitioners believe that through music and movement, language can be strengthening and these ICT tools can bring that to life.

> *...e iai matou matua ua fiafia lava i musika a tamaiti na tapue ma ave ai latou kopi aua ua latou fa'alogologo ai lava ma ua aoaoai foi latou gagana aemaise matua ia laiti o loo iai lava le naunau e fia iloale gagana ma le aganuu (Tolu, talanoga 2.29/7/11). We have parents who find the music that we sent home with their children a tool not only for the children but for them as well to learn the language and culture, especially the young parents.*

Parents are always willing to take part in any area of the centre whether it is singing songs, readings stories or being part of the musical and movement activity. Lua and Tolu found parents joining in and taking part when they have a musical day. It is a way for them to build their relationships with the parents while allowing the opportunity to strengthen parent's and children's relationships. ICT use in centres does not mean children are using computers only. It is about children, educators, parents, and families using information to record learning and sharing learning experiences for children's benefits (MOE, 2005).

Building children's vocabulary should be part of our daily programme, stories and fagogo must be part of those activities not only with books but also stories that we can build with children. Toafa, Tolu and Lua found that it is more meaningful when children are involved in story making and creation. Toafa brought a book that she created with the children that showcased her skills, level of understanding and her knowledge of the type of story that would the young children she worked with. The book was very simple, and appropriate for the age group she was working with. It contains one word to describe each process of their soup making, capturing every step of the making down to the eating part. The best part of her book is that it was all in the Samoan language. Toafa was able to create and make this simple but very effective tool for teaching because she had access to a digital camera, to a laptop, a computer, a printer, and a colour printer and also to professional development that guided her thinking in the making of the book.

4.3 Aotelega/Summary

This chapter highlights the wisdom and knowledge of the Samoan-born women participants. They showcased their ability to communicate and make a connection to their past and present experience through the potential use of ICT. Participants were able to connect the concept that the technology that Samoans used in the past to communicate

information could transfer from one context to another. An example of this is the logo (bell) or the foafoa (corn shell) which has its own meaning when heard. Today in the 21st century there is still evidence of non-functional ICT equipment in the Aoga Amata.

Functional equipment still largely found in the offices is used for administration and planning work by teachers. One participant noted about 90% of their parents have computers, a laptop or some form of ICT device at home which shows how Samoan people are taking on changes in their relationship with ICT. Challenges in ICT range from not having the Samoan language to describe the equipment now in use, to not having functional ICT in the learning environment. Participants spoke of the need for funding to purchase and update equipment and software in the learning environment. They also mentioned the need for professional development particularly around ICT use.

In soalaupule it was emphasised that people in governance in Aoga Amata/ECE should also have an ECE qualification to ensure quality from the top down. Teachers are fully aware of the rapid growth of ICT today and therefore know of the importance of having some support in place for them so they can better support children in their learning and in communication with their families. Participants voiced the need for professional dialogue around ICT for the benefit of children, families and staff.

CHAPTER FIVE *Sailifa'asoa* /Discussion

5.1 *Fa'atomuaga* / INTRODUCTION

Identifying the categories for this chapter was not easy as I found themes overlapped and can intersect (Coffey & Atkinson, 1996) and as a result categorising this material was more challenging. In working with the data, a total of four themes arose that bring about further discussion in proceeding to unpack the message behind the participants' voices for future discussions and research for Aoga Amata in Aotearoa. The themes are:

1. ICT as a window of knowledge

2. ICT as a fuel for children's learning

3. ICT as a tool for face to face meetings

4. ICT as pedagogy for Aoga Amata

5.2 Faamalama mo faiva o mafaufauga/ICT a window of knowledge

Writers of ICT for early childhood have stated that computers and digital devices are becoming an open classroom, a window of knowledge where teachers can by only a press of a button find information at the tips of their fingers from far and wide around the world (Oldridge, 2010; MoE, 2005). The metaphor of a window brings the notion of openness, ability to see through as well as the idea of reachable distance. For children to understand what is opening to them, we need to see things from their perspective. They are young with the need to explore; therefore, it is our responsibility to aid them in transitioning to effectively use ICT (Mapa, Sauvao, & Podmore, 2000). Lua and Tolu shared their work with children with excitement as stated:

> ''*O tamaiti e fiafia tele e faatalanoa ni vaega o latou ata ma taaloaga o loo iluga*
> *o le computer. O isi taimi e talanoa ai lava latou ia ma taitai ai lava e isi tamaiti*
> *se galuega o loo lato galulue ai. O le tele taimi e leo toe o mai tamai e fesili mai*

pe a fia maua se fesoasoani i le faaolaina poo le faaogaina o le computer, ua latou iloa lelei le mea e fai. E leai foi se faamisa ona e seti lava le matou computer i aso uma e pei lava o isi alagaoa mo le aoaoina o le fanau'' (Talanoaga 2: 27/07.11) Our children they are happy to discuss any of their photos and work on the computer. Many times they talk amongst themselves and a child or children will show leadership and lead their work. Most of the time they don't come to us for help as they know what to do, even to put on the computer when it goes off. They are good in doing things together and usually no issues around this area because we set it up daily as part of their learning resources for their learning.

It takes time to lead and guide children so they can work in harmony with each other and respect the equipment you have in their learning area. Such development requires patience, compassion and love as Fouvaa (2013) emphasised in his writing. The notion of openness can also be a danger to children, families and staff. The ICT Framework (MOE, 2005) clearly pointed out the need for centres to take into consideration the range of risks including exposure to inappropriate use of online materials and information The Code of Ethics (New Zealand Teachers Council, 2004), and Graduating Teaching Standards (New Zealand Teachers Council, 2007), guides teachers ethical practice when working with all stakeholders. To apply ethical practice one must understand the practice of various cultures and their protocols by having an understanding of such practice (Okusitino, 2008). Yelland (2005) proclaimed clearly that the future is now and as teachers of the 21st Century we must know and be aware of how to guide the exploration of the digital generation today.

The rapid growth of ICT has brought wonders and many changes in our environment where people are constantly searching on ICT to retrieve a vast array of information for ones use. The information technology digital devices available today can capture the beauty of one's culture that you can share with children and families. One can introduce the richness of their heart's desire such as the love of music, arts, dance or storytelling (legends) which according to Suaalii-Sauni (2011) holds great messages of the traditional Samoan way of living. Understanding the purpose of why we use ICT and how we could

use ICT in our teaching of young children can bring about vast differences in our thinking. Upon reflection, participant Lua (soalaupule 3.10.10.11) explained:

> *...a tatou mataala lava i le fa'aogaina o nei aupega fa'atekenolosi alu uila, ona tatou iloa lea le taua o PDs mo le fafagaina o tatou mafaufau aua le fa'aogaina o nei masini mo soo se vaega o tatou polokalame. E moomia e tatou le lagolago malosi mai a tatou managers ma Board of Trust aua le fa'aleleia atili o tatou galueaga i lenei lava vaega o le galulue ma ICT. O ii foi e iloa ai e tatou pe faapefea ona faatalanoa ni oa ua maua mai lea vaega ma matua.* If we are awaken to the use of ICT tools then we will know the importance of PDs in feeding our minds for the teaching that we do. We need the support from the Board of Trustees to further enhance our knowledge in this area. This will also give us an understanding on how we can share what we know with our parents.

Establishing and building partnership with parents is crucial in early childhood as well as in Samoan culture. When establishing relationships with Samoan families the notion of alo mai alo atu (meeting face to face) is deemed crucial for the purpose of building trust and conveying respect (Tui Atua, 2009b; Kesi & Paleai-Foloti, 2013). Samoan culture is known as an oral tradition where knowledge is passed down from generation to generation by word of mouth and where *alo mai alo atu* is seen as the most important part of that process. The idea of *va fealoafani* and *va fealoai* (relational space) encompasses a way to show one's *alofa* (love) and *fa'aaloalao* (respect) when people come together. Participants spoke of using email to make connections with their parents. Using email opens up conversations with some parents who they hardly meet or converse with because they are always on the rush for work. Some participants shared that they found email an effective way to communicate with parents when it comes to meetings and getting hold of them for emergency purposes. They found that even when communicating through email with parents, one must know how to approach parents respectfully through the use of appropriate language.

Participants also shared how they enhanced their knowledge through the use of ICT during their University studies. They spoke of learning to use the hardware such as the

mouse, keyboard and monitor. Participants were able to expose and explore different software for their own use. Only two participants had level 2 computing woven through their Diploma of Teaching programme. The rest had to learn through extra support services for students. The two participants with level 2 experience as part of their training spoke of how useful that paper was for their teaching and highlighted the need to further that training in ICT for teachers.

Early childhood teachers were expected to leave university with a qualification equipped with teaching strategies and knowledge on how to cope with what is current today. Yet our participants spoke of limited knowledge in ICT and the need to further develop according to the work they do in their professional contexts. Universities do have support put in place for students' academic writing, including computing classes. Nevertheless participants speak of the need to have computing that will prepare them to integrate ICT in Aoga Amata or early childhood centres. They need training that will prepare them to use ICT effectively to be able to trace the children's progress and to share that with their parents. Also important is study that will teach the idea of ethical conduct in the use of ICT with children and families. An example may be in how to take photos to be downloaded onto learning stories.

Tasi (talanoaga 1.29.7.11) had this to say:

> *E taua tele i le taimi o aoaoga i totonu o le univesete ona iai lava vasega fa'apitoa fa'a komiputa mo faiaoga fa'ataitai e le laea ai fua aoga fa'a komiputa o loo fai aua le alualu i luma o le lelei o le faia o le assignment. O loo manaomia mai faiaoga e poto ma atamai i le lalagaina o galuega fai ma masini ia fa'anei ona po mo le aoao ina o le fanau ae a fa'apefea la ona iloa pe a na o sina taimi vaega o le ICT lea sa aoaoina mai i totonu o le Univesete.. O le galuega nei o le galuega a le toatele e le na o faiaoga, e amata mai lava i le taimi e aoao ai matou e faiga lenei galuega sei oo lava i le taimi e faigaluega e manaomia ai lava le au fa'atasi mai e fagufagu ma lagolago mai le galuega mai le manager ma le Board.*
> It is important during university study to have classes that are particularly for early childhood teachers not counting computer classes that support writing

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assessments. They want teachers to be knowledgeable in weaving ICT together with all area of this work but how would we know that when we only received a limited knowledge of ICT that was taught to us during our studies. The work is the work of many and for me it begins from the university studies and continues on when working in centres where the Management team set up areas to fuel our minds.

It is pointless to ponder over the idea of whether children should use computers as they are in a technological world and we need to learn appropriate ways to incorporate ICT in our teaching for the sake of the 21st century child (Van Scoter, Ellis, & Railsback, 2001).

5.3 *Fafagaina o le fia suesue /* ICT a fuel for children's learning

Aoao le tama e tusa ma ona ala aua a matua e le tea ese ai lava (teach the child his ways so when he grows he will never forget) is a proverb that is well known to Samoan people. This view was shared amongst participants as they spoke of children and their ability to work with the ICT machines they have in Aoga Amata. Lua (soalaupule2. 26.8.11) shared:

> ''*E iloa lelei lava e tamaiti le galuega e fai, e fiu lava e gaga se mea e pei o le faaolaina o le computer, e tasi lava le vaai a tamaiti ona matou vaai atu le ua fai lava e latou le faaola ina, faamaulu le software mo le latou taaloaga ia faapea le faasoloina o le latou mouse aua le faiga o se galuega ua i luga o le computer*''* (talanoaga 1: 29/07/11). Children knows the work and we can't hide it from them. They only need to see it once and they will know how to turn it on, where to put the software and how to manipulate the mouse to follow the work that is on the computer.

Toafa also shared a story of how one grandmother was amazed at what her granddaughter can do (Toafa. talanoaga.3.30/7/11).

> *... e iai le matou matua na feedback mai le poto a lona granddaughter e fai masini ia le fale ona sa fia fa'aoga le masini e taaloa ai le teineiti ae leiloa e si loomatua fai ia na o le alu ifo lava o le tamaiti lea oomi... oomi ia vaai atu ua ola.. fai mai le loomatua ua popoto lava tamaiti e fai nei masini.* We had a grandparent who told us of how clever her granddaughter was in turning on their video machine... she wanted to play and watch a video but she couldn't start it so the granddaughter pushed buttons and to her grandmother's surprise, she got it going.

Montessori (2004) uses the sponge metaphor to explain how a young child's mind is ready to take on knowledge from all areas. Our work as teachers is vital in fuelling the children's mind with knowledge and ICT is said to be an effective tool that can convey messages that children can understand because of its visual capabilities as well as those of sound. The integration of ICT should be meaningful to the lives of children and their families if we want to provide equality and balance access to ICT that will guide children's learning (Oldridge, 2010).

Computers, for example, can bring to any Aoga Amata learning environment visual aids and sounds from any part of the Pacific Ocean those children might have not experienced themselves. Children are magnets to the beauty of ICT devices nowadays and therefore we can use that interest as a transportation of our cultural knowledge and language into their mind's eyes as they work with ICT devices. In our last soalaupule, participants voiced the need to develop ICT devices and software in the Samoan language as they recognised the potential of ICT tools in shaping children's learning.

Contemporary children are learning to communicate with their families and friends through ICT devices from telephone, to mobile, to tablets, iPad using email, Facebook and skype. ICT matters when we focus not on the tool but on how we should use and teach for transformation of activities, roles and relationships (Yelland, 2005; Hatherly, 2009).

5.4 *Ala o fesootaiga*/ICT a tool for face meeting face

Participants recognised that ICT is a tool for face to face conversation as ICT programmes such as Skype and Facebook was created to eradicate the distance and bring about speed

to meeting and seeing those who wish to be connected. In *soalaupule* sessions, participants shared their parents' wish to receive an update regarding their child's day through an email from their child. One participant spoke of her grandchild who could manoeuvre the tablet (ICT tool) in order to communicate with her mother when she travels overseas on business.

Traditionally in the Samoan culture, the notion of face to face meeting is crucial when passing knowledge through word of mouth from one generation to the next (Kramer, 1994). In the 21st Century, information about one's culture can easily be found on the internet. Participants' discussed the traditional ways of communicating information that is slowly changing due to Information Technology as they recognised how ICT is changing the way Samoan people traditionally pass information from generation to generation. They are aware of the body of knowledge that ICT holds in which children can be exposed to without some guidance and direction in places. Integrating ICT into the Aoga Amata programme will give children a sense of self-worth, a sense of care when they use such tools, a sense of identity, and a sense of trust that we must set out to achieve with children when working with ICT tools.

The idea of meeting face to face is now changing as people are not always meeting in traditional ways, instead connecting via ICT devices. The use of Facebook for example brings so many people together who are physically distant. The notion of building trust and establishing respect has come easily to our young children when they use Facebook, tags, and snapshot software to establish relationships. Teachers therefore need to guide this area of practice. It was noted in talanoaga and soalaupule sessions that most of the parents in their centres' read Facebook or email rather than the newsletter, that their

children take home in their school bag. ICT has brought a change in the way people converse, greet and meet from all corners of the world.

The notion of face to face meeting conveys the importance of the role of mata (eyes) in the seeing with their own eyes to form one's own understanding. Mata from the Samoan perspective signifies the importance of how we view and perceive things in our children's world (Tagoilelagi-Leota, Kesi, & Galu. 2013).

O le tele o sulu e tele ai figota (Great outcomes stem from many contributions) is a well-known proverb to Samoan people. It conveys the need for all to bring their light (sulu) to work. In our soalaupule and talanoga sessions, participants noted the need for teachers to support each other, identify areas of learning and think of how we can take part in the development of ICT devices and software that will enhance the Samoan language and culture. Children are very capable users of ICT, it is our role to guide, to support, and to protect by getting involved in and grow one's own knowledge of hardware and software that are here today.

5.5 *Aoaoina o le gagana ma le aganu /*ICT pedagogy for teaching language and culture

ICT has the potential to change the shape of any learning environment as well as the relationship between teachers and children. ICT offers inviting and exciting ways of learning that can easily attract a child to devices. ICT can open up access to knowledge across the world in a matter of seconds. There is a dislike of ICT within Aoga Amata because it is still dominated by western ideas through the use of English.

Dr Lonise Tanielu in her presentation at Aoga Amata Summit that was held at AUT University 2014 emphasised the notion that culture has to change in order to survive.

Fa'aSamoa culture is the umbilical cord that connects a Samoan to their roots and it is seen as an essential aspect to the identity of Samoan people. Fa'aSamoa is our way of belonging to one culture and a way to distinguish one culture from another where identity is acknowledged and treasured (Calhoun, 1994). The participants' respect for their culture places them in a difficult position regarding integrating ICT without the approval of their elders. This was highlighted by Lima

> *E faigata ona fully resource ma implement ICT i totonu o le matou aoga ona o nisi o toeaiina o le matou Board e le auai manatu e faaoga computer poo nei masini faanei onapo i galueaga a fanau.* (Lima.soalaupule 2. 26.8.11) It is difficult to fully resource and implement ICT in our Aoga Amata as some of our elderly members of the Board do not agree to incorporate ICT in children's work.

Harrison (2007) in their study on cultural transmission among indigenous peoples found that individuals take to heart the way their culture is communicated for the sake of retaining who they are as people. Nevertheless, Kroeber (1948) noted that culture can change overtime despite the efforts of the older generation in transferring traditional skills and customs to the young generation. The fact is that ICT has changed some of the traditional ways of conveying information which no longer has to be in a face to face situation. ICT devices and software are becoming another way to communicate. Participants noted that there is no reason why we should not be communicating in Samoan. Toafa noted changes in how we traditionally passed information as she observed children in her centre shared information with their parents through email and Skype. She also recognised such changes in her own home environment.

> *... o lau granddaughter ua poto lava e fa'aoga le laptop e skype ai lona tina pe a alu mamao i lana galuega. O le poto latou e fa'amatala uma i lona tina mea na tutupu. Ua masani lava e faalogo i se fa'atonu e fai mai e lona tina ao alu ese* (Toafa. Soalaupule 3)…my granddaughter is very clever to use the laptop to Skype her mother when she goes away for work. She cleverly conveys to her

mother what has been happening and she listens to her mother's instruction of what she needs to do while she is away.

Amituanai (2010) in her address in Critiquing Pasifika reminded us of the latest statistic demonstrates the Samoan language shows signs of decreasing. The number of young people who are New Zealand-born Samoan could contribute to that decrease as they represent the digital age of tomorrow. Tuitaha (2010) urged our gaze towards what we are slowly losing, our language and culture and asked us to do our part. Doing our part would be to enhance our skills in the technology of today so we can maximise our potential in using ICT to grow our children's Samoan language through sound and vision. *Te Whāriki* (MoE, 1996) is a child-centred document that guides the planning in Aoga Amata and early childhood as a whole. The knowledge and use of ICT therefore should feature in Aoga Amata and ECE program planning as it is very much part of the children's world and their interests today. Integration of ICT devices and software can open windows of thinking into how one can be innovative with the use of such tools and software to enhance and strengthen Pasifika languages and cultures.

In the Sootaga (connection) Symposium for Samoan researchers, Dr Suaalii-Sauni (2011) spoke of the need to go back to revisit our archives, our stories, our songs as we will find the messages of what we are looking for in our teaching. Maintaining our language and culture should no longer have to slip through the cracks when our wise elders pass away because we now have ICT, we can record both electronically and in hardcopies the knowledge that we hold for the sake of our future generations. According to Tanielu, (2004) in order for our culture to survive we have to make some changes.

Aspiring teachers should not only grasp the theories governing the why and how of using ICT, but also develop competencies in adapting technologies for diverse learning

environments. ICT offers more flexibility and choices, however, we need to remember that ICT alone is not effective, the need for teachers to understand and be knowledgeable in the integration of ICT in their teaching is emphasised strongly in the literature.

Teachers in this study shared how they used ICT to teach children the Samoan language, music, cooking, traditional Samoan games, learn about the Samoan Independence Day, as well as capturing their work for further discussion. Children were able to share and show their parents what they have done in relation to Samoan traditions and therefore celebrated the use of ICT in their learning. One participant brought a book she created with her children. It was a recipe book on how to make soup. This was written in simple Samoan language that children can pronounce accompanied by clear pictures of each step of how to make the soup with children.

Language is important to the growth of any culture. The philosophy of Aoga Amata gives us hope that our language will also be nurtured and fed into Samoan centres. Today ICT tools and programmes are at every corner of every context. It is a tool that can fuel our children's mind with interest as we develop understanding of how we can use it to the best of our ability for our children's learning. Developing language programmes that children will be interested in as well as developing games in the Samoan language will help maintain our language and develop teachers' knowledge in utilising ICT fully.

Participants called for Samoan elders and linguists to open up discussion on how we can *fa'agaganaina* (create words) for ICT devices, software and other aspects of ICT areas in order for children to use, to explain and describe what they are working with. To grow and maintain the Samoan language as losing one's language will be difficult to

comprehend (Harrison, 2007). The table below is the start to *faagaganina* areas that relate to ICT with the hope that together we can contemplate deeply and commit to contribute to the growth of the Samoan language in the area of ICT.

Table 2 Known and suggested Samoan words for ICT hardware

ICT words	Samoan words	Reasons /meanings
computer	*komiputa*	transliteration of computer
	masini alu uila	machines that operates on electricity
	alagaoa alu uila	resources that operates on electricity
	aupega	tools, gears
	anofale (suggested words)	ano: inside, the core, innermost, fale: home, house
ICT	*masini faugagana*	machine
	so'olagi (suggested word)	soo: connect, link, lagi: sky, cloud, world
technology	*fa'atekonolosi*	transliteration of technology
keyboard	*laupapa*	board
mouse	*fa'atonufolau*	faatonu: direct, guide. Folau: to travel
	iole	a respectful word for mouse
	isumu	mouse
cursor	*fa'ailoilo*	waiting and ready

The participants spoke strongly regarding the need for Samoan words that they can use to explain and described devices, software or aspects of ICT. To grow one's knowledge of language when working with children using ICT, teachers must *saili* (gathered, search, find) *manogi* (fragrances/knowledge) not only from within but also from those who hold richness of our *gagana* Samoa (Samoan language) and *aganuu* Samoa (Samoan culture). As teachers it is vital that we *liuliu le tofa* (contemplate deep thinking) until we reach areas that set to achieve (Tuisuga-le-taua, 2009). Dr Tafili Utumapu-McBride spoke of her love of teaching in the Critiquing Pasifika Education (2013b) conference where she identified an attribute of a good teacher as someone who is constantly improving and developing as a result of feedback and professional dialogues. To improve, one must have an open heart to *saili* (explore), to feel, to respond, to engage in new knowledge (Utumapu-McBride, 2013b).

5.6 Aotelega/Summary

In 2013 the Census showing the population growth of Samoan people in New Zealand. Meleisea (1987) highlighted that Samoan people treasure their knowledge and have held on and handed it down appropriately through word of mouth. Today, ICT has become another mouthpiece for our children where knowledge can pass through such devices and software. ICT opens up windows into the world of knowledge that children can easily access and use if there is guidance put in place. Children are digital natives as information technology is very much part of their culture today. Children clearly demonstrate their fearless curiosity in opening up windows of ICT to view endless information around the world. ICT will fuel children's young minds so we as teachers need to awaken to the importance of contemporary learning theories and to make links between the use of ICT and the many complex connections. Understanding children's potential, plays a vital role in how we view ICT in the Aoga Amata learning environment. This does not mean we supersede or displace traditional learning activities in the centre (Siraj-Blatchford & Siraj-Blatchford, 2003). *Sailitofa* reminds us to be continuously searching fragrances through *tofaliuliu* (constant contemplating deep thinking) as new challenges in the development of ICT are never ending.

CHAPTER SIX *I'uga o le folauga/*Conclusion

6.1 *Fa'atomuaga /* Introduction

This research is aimed at exploring ICT through the lenses of Samoan teachers with the notion of identifying values and beliefs regarding ICT as well as the position and implementation of ICT tools. These are identified as computers and digital cameras as in the Smart Strategies in Manukau (COMET, 2005) in Aoga Amata. The participants were mature Samoan-born teachers which meant that the study had to adopt a culturally appropriate approach. Therefore, the s*ailitofa* concept as an approach was introduced alongside the qualitative and talanoaga methodology which participants are familiar with and enabled them to understand their role. Through the soalaupule method the study has explored the perspectives of Samoan teachers regarding ICT and its implementation in Aoga Amata.

In my experiences with Aoga Amata, the majority of teachers are Samoan-born, rich in their language and culture, and in their contribution to foster and maintain the philosophy of Aoga Amata. Nevertheless, most children attending are those born in a new land: Aotearoa, and are born into this technological world. The research question began the discussion with Samoan teachers regarding their views and use of ICT.

6.2 Fesili na ta'ialaina ai le tofasaili/The research question

The research for this thesis was guided by the following question:

In what ways do mature Samoan-born teachers view and implement ICT (Information Communication Technology) in Aoga Amata early childhood centres in Aotearoa?

This question has been answered through soalaupule and talanoaga from participants. Talanoaga is about coming together to share stories and experiences both formal and informal. Soalaupule is a higher level of talanoaga where collective views and a consensus is sought. The participants were six Samoan-born women who are strong in their Samoan knowledge of the language and culture. The participants were also qualified and registered early childhood teachers holding positions from teachers to management roles. In addition the teachers were also parents and grandparents who have seen the impact of ICT in the lives of their children and grandchildren.

The answer to the research question was:

- These teachers view ICT as a vital tool, nevertheless, a tool that needs strict guidance for children and support for parents and teachers.
- There is a need for professional dialogue with the Samoan community regarding this notion to determine the philosophy and pedagogy for ICT
- Teachers need to be educated not only in their professional development but have it woven throughout their training at University level in order to cover all aspects of ICT for Pasifika/ECE services
- The teachers' role in guiding children's learning when working with ICT is important. We need to be mindful that children today are digital natives.
- There is a need to rethink how non-functional and functional ICT equipment is used effectively in Aoga Amata.
- The urgent need for qualified Aoga Amata management to lead and guide the operation of Aoga Amata. This will eliminate challenges and issues Aoga Amata face regarding not just funding but quality service.
- The need for talanoaga with parents and grandparents regarding the use of ICT to inform and highlight advantages and disadvantages of ICT usage.

- Children as young as 2 years old, show interest, competence, confidence and are fearless in their use of ICT devices. Therefore what are we doing to support them?

6.3 Aotelega o le Tofa Saili/Summary of the research

The purpose of this research was to capture the view of Samoan-born teachers with the notion of highlighting benefits, challenges, and concerns regarding ICT and its use in Aoga Amata. ICT is very much part of today's world yet it has not been seriously looked at from all aspects for the future of the Samoan language and culture. Although the teachers in this study spoke of the challenges they face, it was clear to them that their challenges could be lighter if they were well supported.

Previous studies like the Manukau project (COMET, 2005; MoE, 2005; Oldridge 2010) were reviewed to see how ICT is used in early childhood services included Pasifika centres in Manukau. Two Samoan centres included in the pool of Pasifika centres represent the lowest users of ICT. The use of ICT in Pasifika centres is usually for administration purposes.

Teachers in my study voice a strong rationale for not being able to use ICT in their practice. Funding is the big issue that participants raised as they spoke of the need to purchase ICT devices and provide professional development in that area. One participant spoke of how her Aoga Amata received funds which allowed them to have laptops and a digital camera as well as professional development on how to use such tools. Nevertheless, the support is only provided for up to five years and as they are near to that timeline she expressed her concerns about having to struggle again with one computer in the office when their ICT devices are out of order or out of stock.

Teachers are well aware of the need to understand how to use ICT, not only the skills required for their work, but also the integration into the learning of the children. For this to happen, they see the potential of ICT in the following areas:

- a pedagogy for teaching Samoan language and culture
- a window into the world of knowledge
- a learning environment that extends beyond the walls of the classroom
- a tool for communication
- a means of capturing the minds and stimulating the interests of young children
- a tool that allows collaboration and discussion between children and adults
- a tool that allows the teacher to be a facilitator of the learning rather than a transmitter of the learning

Teachers must recognise the need to be ethical when working with ICT. This notion leads to some parents and members of the Board who resist having the use of ICT in their Aoga Amata. The notion of children not being able to write and children being exploited using ICT could be behind such resistance. Another rationale is that ICT is based in the western language; nevertheless, there is no reason why Samoan people cannot begin to create software that will be rich in the Samoan language. Today, the language is changing to fit the language of Facebook, the language of Twitter, the language of text, and email. We need to be awakening to those changes and rethink and revisit where our Samoan language will be in the next five to ten years, (personal communication with Hillary, 13 June 2014). The study conducted by Faumalevai Sao (2012) highlighted that Samoan people have strong values and beliefs and they strongly adhered to their culture in the village despite the 12 telecentres (The telecentre is a house equipped with computer, internet connection, photocopying, fax, telephone, data projectors and CD burning' which the government introduced to 12 rural villages in 2005). She noted that there were leaders with concerns over materials that children and

families can be exposed to especially with the use of internet. Nevertheless, Sao (2012) found in her study that the villages do not use the telecentre often due to many other responsibilities. The villages also mainly use the telecentre as a way to network and connect with each other and their families overseas. They also use it to create and print music for church, or talk for Sunday as well as a place of learning where school children attended to do research for their school subjects. The study reminds us that Samoan people are very capable beings.

6.4 *Malosiaga ma faafitauli /* Strengths and limitations

Struggles occurred in early stages of this study due to my not having experience in the research field. It was a long journey before I finally arrived at the topic of this thesis. Nevertheless, I was fortunate and blessed to have a very supportive supervisor who guided me with patience towards each part of this writing. I also found struggles due to having a non-Samoan supervisor. Chris (Jenkin) advised me from the start to form an advisory committee to support me with the Samoan concepts used throughout this study. The advisory committee members often met with me individually due to a range of factors including availability, distance and other commitments they had. I have found this support very helpful throughout my journey especially with Samoan concepts that are used in this study. In future I would like to focus on strategies that could bring this group together with participants as I feel it will generate much deeper discussion.

Literature that relates to ICT in Aoga Amata was challenging as there was only one study by Aoga Amata Fa'aSamoa with a few on Pasifika. Time to search and study with limited resources was also a hurdle in my pathway.

The strength of this research is that it required practitioners be empowered to integrate their own language and culture into all aspects of their practice for the benefit of the individual and the collective. Understanding the significance of one's language and culture allows development of pride, self-awareness, and the feeling of empowerment in naming and comprehending the world (or this work) in one's own words (Freire, 1987; Skutnabb-Kangas (2000). Using the Samoan language and concepts from its framework to protocols and processes allows authenticity in the sharing and the collecting of the data. The support from the Samoan community and academic colleagues enriched aspects of the work that was missing from the literature. I was fortunate to have well educated Samoan-born teachers who were mothers and grandmothers themselves take part in this study. Their rich lived experiences throughout their lives and education has strengthened the work.

A major strength of this work was having the opportunity to provide one Pasifika group a voice for their perspectives, enabling them to highlight workable solutions and put forth their concerns regarding ICT for their community, families, and children. The study advocates on their behalf with the hope of promoting more studies in this area in order to accumulate enough voices to make a change.

Teachers are calling for support to understand the influence of ICT (technology), to be exposed to examples of best practice and hands-on experiences, to explore and discover technologies that are developmentally appropriate for the children they work with. They want to be fluent in their approach to technology for their own personal and professional learning and to effectively integrate technologies to enhance partnerships with families and the community at large (Donohue & Schomburg, 2015; Donohue, 2015). Lastly and not least this study has identified through the voices of the

participants the use of ICT as a tool to support the language and culture as well as strengthening partnerships with families. Nemeth (2015) advocates for this as she noted the extraordinary rise in the linguistic diversity of the children entered into early childhood centres as well as the many features (sounds, images & movements) the latest ICT/technologies brings that can bridge the communication gap /language barrier. What was important was the voices of the participants were presented in their Samoan language, making this very accessible to teachers in Aoga Amata.

6.5 *Sailitofa mo le lumanai / * Suggestion for possible future research

Although I set out to explore teachers' views and use of ICT, I have come away realising there is more to research in this area. The use of ICT in enhancing Samoan children's learning and culture needs attention. The view of parents and support of grandparents should be researched, as should the role of the Boards of Trustees and Management in supporting teachers and centres through ICT usage.

I began the study with my own preconceived notions. Instead more information was revealed in my study. There is a need for research to guide the thinking around ICT and how we use or should not use it, not only in Aoga Amata but in our homes. There is also a need for research to develop software appropriate for Samoan/Pasifika children to learn their first language and culture. ICT is mainstream driven, all in English, but that is because we have not done our work to make it ours as well. We need to build knowledge around this area including:

- How parents and grandparents view ICT in homes and in Aoga Amata
- The need to develop a more consistent use of Samoan vocabulary for ICT
- Management view of ICT for funding and professional support for teachers

- The appropriate age to introduce ICT in Aoga Amata, and if we decide not to, then how to support children and families in a digital time?
- How to integrate ICT effectively in teaching degrees especially in early childhood.
- How we view children and ICT.

E ititi le fatu ae ua atoa	(The seed is liken unto a child)
E itiiti le fatu ae ua atoa	The seed is small but whole
O le fatu malosi	Seed with strength
O le fatu ua lava sauni	Seed in readiness
O le fatu ua iai le ola	Seed with life
E ititi le fatu ae ua atoa	The seed is small but is whole
O le fatu tuputupu	Growing seed
O le fatu sosolo	Growing seed
O le fatu ola laulelei	Evenly growing seed
Fafaga le fatu…	Feed the seed
I ave o le la	Rays of sunlight
I tulutulu o le vai	Drops of water
I le manava o le ola	Breath of life
I le mama o le alofa	Food of love

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Appendices

Appendix A Research questions – *soalaupule* groups

Project Title: Tofa saili (Search for wisdom)
Information Communication Technology (ICT) in Aoga Amata (Samoan Early Childhood Centres in Aotearoa).

Project Supervisor: **Chris Jenkin**

Researcher: **Fa'atamali'i Kesi**

Soalaupule groups (2)

Date:
Type of session: (soalaupule group)
Venue:
Time:

> Main research question: In what ways do Samoan-born teachers working at Aoga
> Fa'aSamoa in Aotearoa view and implement ICT in Aoga Amata?

Themes or questions to guide the discussion for soalaupule groups

1. Tell us your view of ICT.

2. Tell us how ICT can contribute to benefit philosophy of Aoga Amata?

3. Tell us how ICT can challenge the philosophy of Aoga Amata?

4. What is your view relating to the use of ICT in Aoga Amata with young children?

5. How could you as a Samoan-born teacher be ICT prepared?

6. Is there anything else people wish to share?

Appendix B Research questions – talanoaga sessions

Project Title: Tofa saili (Search for wisdom): Information Communication Technology (ICT) in Aoga Amata (Samoan Early Childhood Centres in Aotearoa).

Project Supervisor: **Chris Jenkin, MA (hons)**

Researcher: **Fa'atamali'i Kesi**

<u>Talanoaga groups in peers (3)</u>

Date:

Type of session: (talanoaga session)

Venue:

Time:

> Main research question: In what ways do Samoan-born teachers working at Aoga Fa'aSamoa in Aotearoa view and implement ICT in Aoga Amata?

Questions to guide the talanoaga sessions:

1. How have you used ICT to enhance children's learning?

2. How do you use ICT to build relationships with families and communities?

3. How has the computer been used in your centres?

4. How has digital cameras been used in your centres?

5. Are there any challenges you face regarding ICT (computer and digital camera) use?

6. What are your solutions and/or ideas to resolve those issues?

7. Tell us of any tactic you found useful when working with young children and ICT?

8. Is there anything else you wish to add to your earlier view of ICT?

Participant Information Sheet

Date Information Sheet Produced:

08 June 2011

Project Title

Tofa Saili (Search for Wisdom): Information and Communication Technology (ICT) in Aoga Amata (Samoan Early Childhood Centres in Aotearoa).

An Invitation

Talofa lava. My name is Fa'atamali'i Kesi from the village of Papauta in Upolu. I have worked in both Aoga Amata and mainstream centres and am currently teaching in the National Diploma of ECE Pasifika in the AUT Manukau Campus.

I am currently undertaking a study to obtain a Master of Education, and research is a crucial part in gaining this qualification. I invite you to take part in this research to share your views about Information Communication Technology (ICT). Together we can outline notions of how ICT can be implemented in Aoga Amata.

I am aware of the many responsibilities that you hold as a teacher and for that, I thank you for putting aside some of your time to contribute to this study. Please note that your participation is voluntary, and therefore, you may choose to withdraw at any time prior to completion of data collection, without being disadvantaged in any way. If the situation occurs, any information you contributed to the study will be removed and destroyed accordingly.

What is the purpose of this research?

The purpose of this research is to explore the notion of ICT from a Samoan perspective with Samoan-born teachers aged 30 years and over who hold a rich understanding of the Samoan culture and language as well as an understanding of the nature of early childhood education. The research will be submitted in a thesis

for examination and to be graded as the final component in order to complete the Master of Education degree. Various aspects of this research will be presented in conferences and will be published in conference proceedings and in journal articles.

How was I identified and why am I being invited to participate in this research?

The invitation is sent to you because you are a mature Samoan-born teacher who is currently working in Aoga Amata (Samoan preschool) in the Auckland area. There are six centres from the Auckland area that I have invited to be involved in this research and you were chosen based on an interest or issue you have expressed relating to ICT when we met either in one of my computer classes you attended; in a SAASIA (Sosiete Aoga Amata Samoa I Aukilani) or FAGASA (Fa'alapotopotoga Aoaoina Gaganu Aganuu Samoa i Aotearoa) conference; or in your Aoga Amata when I visited students on practicum. We would have discussed the topic of my research (ICT in Aoga Amata) hence the reason why you are chosen.

What will happen in this research?

What will happen in this research is that you will be attending two soalaupule groups and a talanoaga session. The idea is to allow opportunities for you and five other teachers to share your values, beliefs, experiences, suggestions, challenges and solutions relating to ICT and its position in your teaching, your program planning and your relationship with families and communities.

Soalaupule groups will be held in the Manukau campus, MD building for at least two hours. In your first soalaupule group, you will be asked to pair up with one other teacher in the group for talanoaga sessions. This will be at least four weeks from the first one around March/April where we continue to explore the notions of ICT in smaller groups for deeper discussion. Data will be transcribed and emailed to you for your feedback before we have our last Soalaupule group in June before the end of the first semester. At this session we will clarify and validate collected data and hear anything else you may wish to add. A transcript will later come out to you via email for your feedback and approval before I write the final copy.

What are the discomforts and risks?

Soalaupule groups and talanoaga sessions involve working with people because it is about thinking together, searching together, talking together and finding things out together. Your identity therefore will be immediately exposed to familiar and unfamiliar faces. All participants will sign a consent form stating that they will not expose your identity and any part of soalaupule groups and talanoaga discussions with any third party.

Sessions will be conducted in English because you are an academic teacher who is competent in both Samoan and English language. However I welcome the use of our

first language in any part of our discussion as together we can translate to gain a precise meaning as to what you shared.

How will these discomforts and risks be alleviated?

A consent form will be signed by you the participant before the process of data collection begins. The purpose of the form will be emphasised in our first meeting as we all have a responsibility to ensure confidentiality is maintained. The person transcribing the data will also sign a consent form. I will not reveal your identity or the identity of your centre in the thesis, conference presentation or any written journal articles related to this research.

A meal and hot drinks will be provided for soalaupule groups and talanoaga sessions. You will be given a petrol voucher to cover your mileage costs and a summary report instead of the whole thesis due to my financial situation.

I will compile and handout in the first soalaupule session the list of counselling services in your area for your use if you feel emotionally upset with any information shared.

At any stage where you may feel emotionally upset with any information shared, you will be advised to seek counselling with counselling services that are near and familiar to you in your community. However, AUT Health and Counselling service can also offer their services if it is needed.

What are the benefits?

Participating in this research will give you an opportunity to express your view, ask questions, implement suggestions and find solutions relating to ICT in your Aoga Amata. Your community and centre will benefit from this study in terms of new knowledge regarding ICT and its implementation for your young children. The completion of this project will also benefit me by gaining new concepts that will inform my teaching as well as a Master of Education degree.

How will my privacy be protected?

I cannot be accountable for any participant's behaviour in terms of protecting other participants' identity, however this will be emphasised in the induction meeting and our first soalaupule discussion as well as in the consent form. Please note that the end result of this research will be available in the AUT library and parts shared in conferences might be published in conference proceedings and journals. The information that will be published and shared is based solely on the data you consent to be gathered for the purpose of this research and you will remain anonymous.

What are the costs of participating in this research?

Time is valuable and it is something I am asking you to offer for this study. You will be recompensed for your travel and food in all soalaupule and talanoaga session as a form of a mealofa (gift).

What opportunity do I have to consider this invitation?

I hope to meet with all potential participants in person in April 2011as this will be the appropriate way to do things when it comes to our Samoan culture. Here we will negotiate a time for me to return to pick up the form and to hear from you. The date for the first soalaupule group discussion will be negotiated at that time, leaving the other dates for talanoaga sessions and the last soalaupule group discussion to be arranged when we get together in our first soalaupule group which hopefully falls on the last week of April or early May 2011. The time frame for this research is flexible so as to meet your needs.

How do I agree to participate in this research?

In the Fa'aSamoan (Samoan culture) our word is worth more than any written material hence the notion of meeting and consulting with you in person before any paper work is shown. A formal written acceptance of your participation will need to be gain before any data collection as it is part of research procedure. Please note that you do not have to feel obligated to take part and that you are welcome to contact me at any time for clarification.

Will I receive feedback on the results of this research?

Yes. A summary report of the end result will be shared with you once the research report is completed and approved. A copy of the final thesis will be made available in the AUT library as some aspects of the research may be written in journals and presented in conferences.

What do I do if I have concerns about this research?

If you have any concerns regarding the nature of this project, in the first instance notify the Project Supervisor, Ms Chris Jenkin, chris.jenkin@aut.ac.nz, 921 9999 ext 7911.

Concerns regarding the conduct of the research should be taken to the Executive Secretary, AUTEC, Madeline Banda, *madeline.banda@aut.ac.nz* , 921 9999 ext 8044

Who do I contact for further information about this research?

Researcher Contact Details:

Ms Fa'atamali'i Kesi, School of Education, AUT University. fkesi@aut.ac.nz
921 9999 ext 9381.

Project Supervisor Contact Details:

Ms Chris Jenkin, School of Education, AUT University. chris.jenkin@aut.ac.nz
921 9999 ext 7911

Approved by the Auckland University of Technology Ethics Committee on:
28th March AUTEC Reference number: 11/51

Appendix D Consent Form

Consent Form

Project title: Tofa saili (Search for wisdom): Information Communication Technology (ICT) in Aoga Amata

Project Supervisor: **Chris Jenkin, MA (hons).**

Researcher: **Fa'atamali'i Kesi**

○   I have read and understood the information provided about this research project in the Information Sheet dated 01 March 2011.

○   I have had an opportunity to ask questions and to have them answered.

○   I understand that notes will be taken during our talanoaga and that they will also be audio-taped and transcribed.

○   I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.

○   If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.

○   I agree to take part in this research.

○   I wish to receive a copy of the report from the research (please tick one): Yes○   No○

Participant signature:

Participant name:......................................……………………………………………………

Participant's Contact Details   ……………………..

…………………………………………………………………………………..

Date:

Approved by the Auckland University of Technology Ethics Committee on 28th March, 2011

AUTEC Reference number 11/51

Note: The participant will retain a copy of this form.