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Contributors

Professor Tangikina Moimoi-Steen is the Chief Executive Officer for the Ministry of Education & Training. She chairs the ministry's Executive Research Committee & has been proactive in research for many years. Professor Tangikina provided the *Foreword* for this *Tokoni Faiako Tonga Journal of Education* volume. She was part of the mentoring team & offered her support & official ministerial approval towards the consecutive *TIOE Research Symposiums* in 2020 which produced the fine authors for this journal volume. Professor Tangikina also presented the keynote address for the first symposium followed by the presentations of the authors for this volume. Her keynote was titled: *From Little Things, Big Things Grow: Research-Ability & Capacity Building of Faiako Ma'a Tonga*.

Ms Liuaki Kovi Mei Aotearoa Fusitu'a is the Dean for the Tonga Institute of Education under the Ministry of Education & Training. She is a member of the ministry's Executive Research Committee & has been involved in research for many years. Her paper in this first *Tokoni Faiako Tonga Journal of Education* in 2010 has informed countless practices for teacher training at the TIOE & teacher professionalism in the Tonga context. Her paper was titled: *What is the Ideal Tongan Teacher?* Ms Fusitu'a provided the *Introduction* for this *Tokoni Faiako Tonga Journal of Education* volume & took on an administrative role in the mentor-author affiliation towards the completion of this second volume.

Dr Robin Siale Havea is the Campus Director for the University of the South Pacific in Tonga. He was born & raised in Tonga. After graduating with a BA (Dist) from 'Atenisi University, Tonga, he continued his love of studying Pure Mathematics in New Zealand where he graduated with a MSc (Hons) from the University of Waikato & a PhD from the University of Canterbury. Immediately after his PhD defense in 2001, he joined the USP as a junior Lecturer of Mathematics based at the Laucala Campus. While climbing up the academic & administrative ladders at Laucala, he was appointed Campus Director of the USP Tonga Campus where he started working in July, 2019. By profession, he is an active researcher in: *Constructive Mathematics*; *Banach Algebra Theory; Foundation of Mathematics; Topology; Classical* & *Abstract Analysis*. Throughout the years, he has developed an interest & published in other areas including: *Mathematics Education; Mathematical Modelling in Food Security, Climate Change* & *Robotics*. Dr Robin is part of the mentoring group for this *Tokoni Faiako Tonga Journal of Education* volume.

Dr David Taufui Mikato Fa'avae is a Pacific Education Lecturer at the *Te Kura Toi Tangata*, Education Division, University of Waikato. He is Tongan, with ancestral links to Satalo in Upolu Samoa, & was born in Alofi, Niue. His mother, Fatai 'Onevai Tōmasi is from Niuafo'ou & Angahā, 'Eua. His father, Siō Milemoti Fa'avae is from Ma'ufanga, Tongatapu, Taunga, Vava'u, & Satalo in Samoa. Previously, he was a secondary school trained teacher in Aotearoa, New Zealand before becoming a research fellow at the Institute of Education (IOE), based at the USP Tonga Campus. He is committed to supporting teachers in Tonga & was involved in this through Tailulu College & the TIOE. Dr Dave is part of the mentoring group for this *Tokoni Faiako Tonga Journal of Education* volume & led the group reflexive paper which is a collaboration of the mentoring process & experiences.

Dr 'Ema Wolfgramm-Foliaki is a lecturer within the School of Curriculum & Pedagogy, Faculty of Education & Social Work, University of Auckland. She is from Falevai, Vava'u; Tongoleleka Ha'apai & 'Atatā, Tonga. She attended Tonga High School (Class of 1975) before migrating to Aotearoa, New Zealand where she currently lives. Dr 'Ema is part of the mentoring group for this *Tokoni Faiako Tonga Journal of Education* volume. Her contribution is a reflection on what this project means to her personally together with her experiences of mentoring & working alongside fellow teachers & researchers from her home country.

Dr Sonia M. Fonua is *papālangi* (New Zealand European) & was born & raised in Aotearoa, New Zealand. She is married to her Tongan husband & their sons are her inspiration to improve the education system for all Pacific peoples. She has been working in higher education for 20 years, recently completing her PhD, *Ha'otā: Transforming Science Education in Aotearoa, New Zealand for Tongan Students*, in Critical Studies in Education within the Faculty of Education & Social Work, University of Auckland. Her research interests are *Ethnic Disparities in Education & Embedding Moana/Pacific Knowledge & Ways of Being in Science Teaching & Learning Spaces*. Dr Sonia is part of the mentoring group for this *Tokoni Faiako Tonga Journal of Education* volume.

Mr. Sione Ata Siu'ulua is the son of Taniela Petoveni Siu'ulua of Lofanga, Ha'apai & Meliami Havili Siu'ulua of Ha'ateiho, Tongatapu. He was born & raised abroad in Salt Lake City, Utah yet currently lives in Tonga at Tokomololo while conducting postgraduate research. He is a PhD candidate in Anthropology at the University of Auckland. His doctoral research is focused on *Notions of Family* (e.g., nuclear, extended, etc.), *Indigenous Kinship* (such as the Tongan *kāinga*), *Indigenous Music, Indigeneity, Coloniality, & Tongan Indigeneity/Coloniality*. Mr. Siu'ulua is part of the mentoring group for this *Tokoni Faiako Tonga Journal of Education* volume.

Dr Poliana P. Fa'oliu-Havea is an Assistant Lecturer for the School of Pacific Arts, Communication & Education at the University of the South Pacific. Prior to 2021, she was a Senior Lecturer at the Tonga Institute of Education under the Ministry of Education & Training lecturing secondary English & coordinating the practicum, education & research programmes. She initiated the consecutive *TIOE Research Symposiums* in 2020 which birthed the fine authors for this journal volume. Dr Poliana was a member of the ministry's Executive Research Committee & took on an administrative role in the mentor-author affiliation towards this *Tokoni Faiako Tonga Journal of Education* volume as well as its final editing & formatting.

Dr Sela Tapa'atoutai-Teisina is the Chief Education Officer/Head of Unit for the Professional Development Unit under the Ministry of Education & Training. Her paper is taken from a portion of her doctoral thesis titled: *Factors Influencing the Faiako Ma'a Tonga Professional Attitude Formation at the Tonga Institute of Education*. It focuses on the idea Tonga teachers' (*Faiako Ma'a Tonga*) perceptions as to what contributes to their positive attitude formations during their pre-service teacher training years at the TIOE – *lecturers, courses, & relationships with important others*. As revealed in the study, all these factors positively contribute to the FMT professional attitude formation & development in terms of teachers' personal & professional lives. Dr Sela received her doctoral degree from the University of Waikato.

Mrs. ʻAmelia Nightingale Fuko-Folaumāhina is the Chief Education Officer for the Examinations & Assessments Unit, Curriculum Development Division under the Ministry of Education & Training. She has worked & served countless years at the ministry & in various leadership & managerial roles. She is a member of the ministry's Executive Research Committee & her paper is taken from a portion of her master's thesis titled: *Fīfī Ika Maka: Valuing Mentoring & School Leadership in Tonga*. Mrs. Folaumāhina obtained her Master of Education degree from the University of the South Pacific.

Mrs. Lōsana Vao Lātū is the Chief Education Officer at the Policy, Planning & Research Division & is Head of the Research Unit for the Ministry of Education & Training. She hails from Leimātuʻa & Mataika Vavaʻu & is married to Tēvita Kalafitoni Lātū of Leimātuʻa, ʻUtulei & Falevai Vavaʻu. She taught Mathematics in various secondary schools from 1993-2014 & has taught in almost all the outer islands except Niua Foʻou. She is a member of the ministry's Executive Research Committee & her paper is taken from a portion of her master's thesis titled: *Family Structure & the Academic Success of Students in Secondary Schools*. Mrs. Lātū obtained her Master of Education degree from the University of Canterbury, New Zealand.

Mrs. Tamaline Wolfgramm-Tuʻifua is the Principal for the Pakilau Middle School under the Church of Jesus Christ of Latter-Day Saints school system. She is from Mataika, Vava'u but currently lives at Matangiake, Tongatapu with her husband & 5 children. She has been a Mathematics teacher at the Liahona High School for 16 years & she loves teaching the discipline especially in finding ways to inspire learners to love the subject. Her paper is taken from a portion of her master's thesis titled: *Tuli Hono Ngaahi Mālieʻ ʻi Loki Ako: Best Practices for Teaching Mathematics in Tongan Secondary Schools*. Mrs. Tuʻifua obtained her Master of Arts in Education degree from the University of the South Pacific.

Mr. Viliami Hēvaha ʻi Moana Vakapuna is a Senior Lecturer at the Tonga Institute of Education under the Ministry of Education & Training. He lectures secondary geography & is the institute's current Research Coordinator. He is a member of the ministry's Executive Research Committee & his paper is taken from a portion of his master's thesis titled: *Fakalekesi ʻo e Tongaʻ: A Tongan Conceptual Framework for Improving Educational Access*. He is also part of the TIOE reflexive paper titled: *Student-Centered Learning at the Tonga Institute of Education*. Mr. Vakapuna obtained his Master of Arts in Education degree from the University of the South Pacific.

Mrs. ʻAna Fīnau Haupeakui is the current principal for Saint Andrew's High School under the Anglican Church school system. Prior to 2018, she was a Senior Lecturer at the Tonga Institute of Education under the Ministry of Education & Training. She was the institute's leading & longest Education & Practicum Coordinator from 2005-2016. In 2017, she became more proactively involved in pioneering the ECE B.Ed Teaching Programme that started in 2016 until she retired in 2018 & was contracted at the TIOE in 2019. She is part of the TIOE reflexive paper titled: *Student-Centered Learning at the Tonga Institute of Education*. Mrs. Haupeakui holds a Master of Education degree from the University of the South Pacific.

Mrs. Haley Ellen Bernas-Takau is a Lecturer at the Tonga Institute of Education under the Ministry of Education & Training. She lectures secondary core English, Inclusive Education & coordinates the primary practicum programme. She was instrumental in initiating & mapping the institute's first Research Committee in 2018 & is part of the TIOE reflexive paper titled: *Student-Centered Learning at the Tonga Institute of Education*. Mrs Bernas-Takau is pursuing a Master's degree in Speech-Language Pathology from the University of Wisconsin-Eau Claire.

Mrs. 'Ilaisaane 'O. Fa'asolo-Fatukala is a Lecturer at the Tonga Institute of Education under the Ministry of Education & Training. She heads the institute's education programme & lectures pedagogy, educational psychology & educational assessment & evaluation. She also coordinates the practicum programme for both primary & secondary teacher trainees. She was too was instrumental in initiating & mapping the institute's first Research Committee in 2018 & is part of the TIOE reflexive paper titled: *Student-Centered Learning at the Tonga Institute of Education*. Mrs Fa'asolo-Fatukala is completing her Master of Education degree this semester through the University of the South Pacific, Tonga Campus.

Mr. Eddy Morgan Fakahua is the Deputy Principal & Registrar for the Tonga Institute of Education under the Ministry of Education & Training. Due to his hectic registrar duties, he now only lectures the *Fakakoloa 'o Tonga* & *Tofi'a Koloa'ia* courses for the ECE B.Ed Teaching Programme. He presented a paper in the first *Tokoni Faiako Tonga Journal of Education* volume in 2010 titled: *Va'inga Faka-Tonga'* & is now part of the TIOE reflexive paper titled: *Student-Centered Learning at the Tonga Institute of Education* for this *Tokoni Faiako Tonga Journal of Education* volume. Although he has been a proactive educator for many years, Mr. Fakahua currently holds a Master of Economics degree from the University of the South Pacific.

Mr. Failo Tāufa is a Lecturer at the Tonga Institute of Education under the Ministry of Education & Training. He lectures secondary mathematics & coordinates the secondary practicum programme. His name is not foreign in Tongan households due to his longstanding proactive presence as a national & iconic mathematician & mathematics teacher spanning secondary & tertiary levels. Mr. Tāufa continues his legacy this time round as one of the TIOE's most celebrated teacher educators. He is also a part of the TIOE reflexive paper titled: *Student-Centered Learning at the Tonga Institute of Education*.

Mr. Sonatane 'Ofahelotu Kauvaka is a Senior Assistant Secretary & Head of School for Media & Journalism at the Tonga Institute of Higher Education under the Ministry of Education & Training. He lectures website design, macromedia & multimedia productions & holds a Bachelor of Computer Graphic Design from the University of Waikato, New Zealand majoring in digital design. He is also by profession, a skilled graphic designer. Mr Kauvaka illustrated the front cover of this *Tokoni Faiako Tonga Journal of Education* volume.

Foreword

Tangikina Moimoi-Steen

Chief Executive Officer, Ministry of Education & Training
Kingdom of Tonga

It is indeed a great honour to pen this important but short section of the *Tokoni Faiako Tonga Journal of Education* volume, which aims at promoting the interest of scholars and the general public on why they should be reading this volume of academic prose. From the papers presented here, I pause to think of the significance of *reflective practice* in any profession, let alone teaching, and especially that of the *Faiako Ma'a Tonga* which is situated and embedded in the cultural contexts of the Tongan society. Kolb (1984, cited in Kolb et. al, 2001) developed a reflective practice model based on learning from experiences or experiential learning. Miettinen (2000) explored the same but using Dewey's theory of reflective thought and active learning (Dewey, 2011). According to Dewey (2011), students (or student teachers in this case) must be active learners in search for answers and that what they learnt should be related to their experiences and within their intellectual capability. Both Kolb and Miettinen emphasised the intention of reflective practice and that is for the learner of the experience to make the necessary links between theory and practice; thereby demonstrating that learning occurs when these links are well understood both in academic and in socio-cultural learning contexts.

One of my first official functions as a CEO for the Ministry of Education and Training (since starting in Nov 2019) was to give a keynote speaker at the *Faiako Ma'a Tonga* symposium, hosted by the Tonga Institute of Education (TIOE). I was impressed by the *Langa Faleako* (building a house) framework and its four pillars or posts of *Poto* (Knowledge), '*Ilo* (Wisdom), *Lea* (Speech) and *Fakafeangai* (Teacher's Interactions). The socio-cultural teaching focus of the *Faiako Ma'a Tonga* is deeply integrated within the cultural mores of the Tongan society. Here lies the crux of my reflective practice; the significance of promoting this uniquely Tongan brand of *Langa Faleako*, where the training focus is not just about training student teachers how to teach effectively in the classrooms and in different academic disciplines they specialise in, but also training them to be well-grounded social and cultural practitioners as *Faiako Ma'a Tonga*. For the latter role, student teachers integrate the four *Kavei Koula* (golden rules) of *Anga Faka-Tonga* or being a Tongan and that is (*Faka'apa'apa* (Respect), *Tauhi Vā* (Reciprocity), *Loto-tō* (Humility), *Mamahi'i Me'a* (Loyalty)). Cultural learning as espoused by Kolb (1984) is more effective through experiential learning from models and through participatory and active engagement with the local people and parents in the school community.

Scholars such as Dewey (2011), Hunter (2021) and Kolb et. al (2011) advocate for teaching of students experientially and getting them to make the links between theory and practice. The *Faiako Ma'a Tonga* teachers are unique teachers in my perspective, the teaching and learning of the *Anga Faka-Tonga* is considered as paramount a component of the curriculum as that of the academic and pedagogical content. In fact, a *Faiako Ma'a Tonga* who has the *Anga Faka-Tonga* is highly valued in the Tongan society, more so than, say, teachers who are experts in their academic discipline but lacking the qualities of the *Anga Faka-Tonga*.

As student teachers become more experienced and confident as the *Faiako Ma'a Tonga*, reflective practice is significant and must be a component of their continuing professional development.

The attributes of *Anga Faka-Tonga* and being a *Faiako Ma'a Tonga* are essential elements of reflective practice, not only through classroom teaching but beyond, in their social and cultural interactions with students, parents and the general school community.

In closing, the saying by Benjamin Franklin '*Tell me and I forget, teach me and I remember, involve me and I learn*', rings true for the *Faiako Ma'a Tonga Anga Faka-Tonga*, as they become entrenched in the art of reflective practice as professional teachers.

Enjoy this volume of *Tokoni Faiako*.

Mālō,

Tangikina Moimoi-Steen

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Introduction

Liuaki Kovi Mei Aotearoa Fusitu'a

Dean for the Tonga Institute of Education, Ministry of Education & Training

The *Langa Faleako Framework* that constitutes the professional development of the Tongan teacher aspires to produce *Faiako Ma'a Tonga* who are aptly developed in the areas of *'Ilo, Poto, Lea* and *Fakafeangai*. The *Tokoni Faiako Tonga Journal of Education* is a collection of academic articles of knowledge and skills to assist Tongan teachers in their professional development and realisation of the *Faiako Ma'a Tonga* intention.

This *Tokoni Faiako* volume includes the article, *Fīfī Ika Maka: Valuing Mentoring and School Leadership in Tonga* by 'Amelia Fuko-Folaumāhina. She developed the *Tolonaki Mentoring Model* which bespeaks the usefulness of Tongan metaphors in the articulation of and the conduct of the mentoring process. *Tolonaki* is the Tongan word for stoking a fire and as such, mentoring is seen as the act of stoking the fire, the passion, the good will, the *loto'i ngāue* of the teacher and leader who are being mentored. 'Amelia Fuko-Folaumāhina is the Chief Education Officer at the Examinations and Assessment Unit of the Curriculum Development Division of the Ministry of Education and Training.

Lōsana Lātū introduces us in her article regarding the relationship between *Family Structure and Academic Success of Secondary School Students in Tonga*. She identifies four predictors associated with the family which directly links to academic success. These are parental involvement, family structure, family expectations and Christian faith. Lōsana Lātū is the Chief Education Officer at the Policy, Planning and Research Division of the Ministry of Education and Training.

Fakalekesi 'o e Tonga': A Conceptual Framework for Improving Educational Access by Viliami Vakapuna highlights important *vā* (relationships) to be maintained between key positions and peoples in the school in order to bring about improved access and academic achievement for students. He proposes a variety of Tongan-based models/methods of teaching and leadership to assist students and improve student learning. Viliami Vakapuna is a Senior Lecturer at the Tonga Institute of Education, one of the higher education institutions of the Ministry of Education and Training.

Tamaline Wolfgramm-Tu'ifua, delves into the teaching of Mathematics in her article *Tuli hono Ngaahi Mālie' 'i Loki Ako: Best Practices for Teaching Mathematics in Tongan Secondary Schools*. She highlights several useful methods which have helped students in their understanding of Mathematics. These methods include code switching between English and Tongan, group work, clear and simple instructions, activity-based learning and increased student response time. Tamaline is the Principal of the Latter Day Saints' Pakilau Middle School.

Sela Tapa'atoutai-Teisina, Claire McLachlan and John Williams sought to find out the factors that influenced the formation of professional attitudes of teacher trainees whilst they were in training at the TIOE. Their article titled *Factors Influencing the Faiako Ma'a Tonga Professional Attitude Formation at the Tonga Institute of Education* identifies the TIOE lecturers, the TIOE courses and the relationships between the teacher trainees and 'important others' at the TIOE as the three main factors influencing the formation of the professional attitude of the teacher trainees whilst they were at the institute.

We are fortunate in this edition to have two reflexive articles that lend support to the paramountcy of teachers being reflective practitioners. One is authored by the panel who mentored the main contributors in this volume, and they share their mentoring experiences highlighting the strength of the *vā* that ensued and carried the mentoring process to fruition. The other reflexive article is penned by some of the lecturers of the Tonga Institute of Education and brings to light the approach of student-centered learning and the challenges encountered in the effort to ensure it is widely practiced.

It is hoped that the range of articles included in this edition will provide *Faiako Ma'a Tonga* with useful insights, strategies and tools to use in their classrooms for improved student learning outcomes. It is also hoped that some teachers will be inspired to carry out their own research to shed light on areas that they would like to see clarity in and add to the dearth of literature on education in Tonga.

1

Ko e Talanoa´ Ke Hokohoko Atu: Ongoing Collective Mentoring Reflections

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'Ema Wolfgramm-Foliaki
Poliana P. Fa'oliu-Havea
Sione 'Ata Siu'ulua
Sonia M. Fonua
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1. *Talateu´* | Introduction

As educationist 'Amelia Fuko-Folaumāhina (2018) alludes, mentoring in Tonga is still very much an informal practice woven through cultural traditions and values and community leadership responsibilities. Building on this context, in this article we weave together Tongan cultural knowledge, values, and aspirations with formal processes related to academic writing and publication. Within the formal context of schooling and higher education, we articulate what it means to mentor and support educators and researchers who are also Ministry of Education and Training (MET) officials. The *Tokoni Faiako Tonga Journal of Education* at the Teacher Institute of Education (TIOE) provides a strategic and deliberate space for teachers and MET officials to share their research studies and reflections in the hope that such knowledge and skills will be utilised by teachers in the small island Kingdom of Tonga.

Originally, the *Rethinking Pacific Education Initiative for and by Pacific People* (RPEIPP) was developed by Pacific leaders between 2001 and 2002 to empower educators and transform education systems in the region (Taufe'ulungaki, 2014). This involved the (de)constructing and (re)thinking of leadership and mentoring practices that are relevant and appropriate with the inherent practices specific to the particular cultural contexts. In a 2014 publication, Professor 'Ana Maui Taufe'ulungaki in consultation with other Pacific educational leaders revised RPEIPP into its current form *Rethinking Education Across the Pacific'* (REAP). Drawing from its meaning to gather or to harvest, REAP echoes a deliberate shift, calling Pacific scholars, educators, and leaders to make visible and discoverable the worthwhile and valued knowledges and practices within each of the small island nations (Taufe'ulungaki, 2014). Consequently, the *Vaka Pasifiki Education Conference* (VPEC) was initiated to provide a collective space for teachers and educators to come together, collaborate, and support each other as well as share ideas and best practices (Taufe'ulungaki, 2014).

The *Tokoni Faiako Tonga Journal of Education* is an initiative developed from the REAP vision by Tongan educationists. As a consequence of its development, the leadership and strategic partnerships and elaborate relational connections between Professor 'Ana Maui Taufe'ulungaki, Dr Tangikina Moimoi-Steen, Dr Johansson Fua, and Miss Liuaki Fusitu'a is the primary reason for the mentors to come together to support the authors with the publication of their master's

research. Our collective contribution is sustained through *vā māfana*, guided by the spirit of generosity and care.

2. *Fuofua Fakakaukau´* | Our Initial Reflections

Within teaching and learning, teachers are regularly encouraged to reflect on their practice. The title of our paper, "*Koe talanoa´ ke hokohoko atu*", reflects our ongoing collective conversations about mentoring and research publications. In this particular section, our *fuofua fakakaukau´* (initial reflections) within the wider conversations linked to our mentoring experiences are guided by two questions.

2.1 What were some key ideas and principles that enabled the mentoring engagement, conversations, and practice with the author?

Robin Siale Havea

> *When I was approached to become part of this project, I immediately wanted to join simply out of curiosity and because I had never done anything of this nature before. I always wanted to be part of something that is new to me especially if it is not in my line of work and profession; something I could learn from in a different way. Having just returned to Tonga after many years working overseas as an academic, I thought this would be a great opportunity where I could be part of something where I could share my experience and give something back by joining this team of mentors.*
>
> *The rewarding experience in this project was the opportunity to watch an author grow in a natural way. You coach and guide the author with minimal interference particularly when it comes to expressing and organising thoughts and ideas let alone putting those ideas in writing. The author needed encouragement and positive feedback all the time. Preparing a manuscript to be reviewed for publication in a professional journal is not easy for a first time author. It proved very important to find time to discuss with the author key issues you as a mentor thinks would improve the article in both content and form, then let the author do the rest.*

Liuaki Fusitu'a

> *The willingness of the mentors to assist in this exercise has brought about gratitude – loto fakamālō'ia and has reawakened self-confidence – loto lahi to propel the authors to complete their writing tasks. For my part in this exercise, because I am based in Tonga, I was tasked with 'following up' the authors locally and providing writing spaces for them should they need it and just generally providing encouragement. What I had found to work in these mentoring exercises were the frequent reminders and the encouragement via email and via face to face informal meetings. I found that feveitokai'aki – mutual respect – as equals, as peers, as colleagues worked in our favour. There was honesty and a genuine desire to complete the project.*

'Ema Wolfgramm-Foliaki

We were at the end of a work zoom and the three of us (Dave, Sonia, and I) started to talk about our fellow colleagues in Tonga and how they were coping with this global pandemic. We wondered about the students we had had the privilege of meeting in Sept 2018 and if they had continued with their postgraduate studies. More importantly, we wondered if and how we could help.

From memory, we agreed that a good move will be for Dave to reach out and to make our intentions and availability known. From this point, I remember coming off the Zoom on a high in anticipation of the possibility of contributing to my home country in some way. Within 48 hours Dave emailed Sonia and I to tell us how and what we can contribute to. Our 'Tokoni Faiako Project' just feels right! From the beginning, I felt our desire to contribute in some useful way came from a good place, underpinned by values that are deeply embedded within us. If I can name one it would be 'ofa, loto 'ofa, manatu 'ofa moe 'ofa fonua. I think our decision to be mentors rather than reviewers reflects this quite well. In my experience, often one's idea of help is to show others 'the right way' how to do things. I believe ours is to work alongside our colleagues and to draw on our values, knowledge and experiences to guide the way we relate to our mentees. Our aim is to support Tongan teachers/researchers to publish their work in the Tokoni Faiako Tonga Journal of Education and in the process see the importance of disseminating their work locally and abroad. Respectful relationships are key to how we approached the mentor/mentee vā. Being mindful of others and respecting one another guides our journey. It is definitely the most enjoyable part of my work.

Poliana P. Fa'oliu-Havea

As part of the administration team for this mentoring affiliation, but more so in coordinating the TIOE symposium in early 2020 which produced these fine authors, I would say the 'reaching out' and voluntary collaboration by Dr Dave, Dr Sonia, and Dr 'Ema from New Zealand coupled with the selection of mentors here in Tonga was, on my part, very timely and a saving grace. Particularly, the professional mentoring role they offered and shouldered because I definitely would not have been able to round up a willing team of mentors. The 'rope' they hurled over is symbolic to this journal volume's front cover where the prominent owl logo of Sio Atu TIOE (looking forward, beyond) extends help and assistance to those in need and takes the ZPD[1] role further. It mirrors what Vygotsky also coined – More Knowledgeable Other (MKO) – because while the TIOE, the MET and school systems in Tonga are capable of conducting research, hosting symposiums, and hold countless talanoa sessions about their research work and findings, publication outputs are still a cloudy prospect met with inadequate human resources, skills, expertise, and support. This act of 'Lī pē ha maea'[2] is reflective of the paramount purpose of this journal volume and the spirit of feongo'i'aki (thoughtfulness and empathy) – "Our collective contribution is sustained through vā māfana, guided by the spirit of generosity and care".

In terms of the mentoring engagement, conversations, and practice, I would say feongo'i'aki played a major role given all the authors and mentors are high-profile educationists in Tonga and in New

[1] Zone of Proximal Development - '*The difference between what a learner can do without help and what he or she can achieve with guidance and encouragement from a skilled partner. Thus, the term "proximal" refers to those skills that the learner is "close" to mastering*'. (Vygotsky, L. S. (1997). *The collected works of LS Vygotsky: Problems of the theory and history of psychology* (Vol. 3). Springer Science & Business Media).
[2] Extending a rope.

Zealand with hectic workloads and schedules. The zoom meetings between authors and mentors and between mentors were carefully and alternately scheduled to meet everyone's convenience and availability – first to deliberate on progress and a way forward, to fiddle with zoom technology and more so, for a rather therapeutic laugh and talanoa. The scheduled milestones, on the other hand, were structured to allow sufficient time for both authors and mentors to virtually navigate, work on, and fine-tune their research papers. The end product was passed on to a different mentor for a second review before the final copy editing process. Again, the trail of feongo'i'aki continued as we all endeavored towards the target deadline. I must conclude, the journey was neither smooth nor easy, but it was definitely worth it capitalising and embodying the concept and act of ''aonga ma'a Tonga' (useful/necessary/practical for Tonga).

Sione 'Ata Siu'ulua

I have been fortunate to be asked to participate in this project in supporting teachers/educationists here in Tonga. I have been in Tonga the past year for my doctoral research and have wanted to get involved in the community while I am here. This has been a wonderful opportunity to take part in the great work being done by the TIOE and the Ministry of Education and Training to enhance educational leadership, policy, and practice. Although my PhD is in Anthropology, I have always had a passion for education as my master's is in Educational Leadership and Policy. I was able to mentor another PhD student which has been an honor for me. The student I was working with is still in his first year of studies and with me being in my final year of my doctoral studies, I was able to use my past experiences to help mentor him in this process. I think there was a sense of faka'apa'apa (respect, honor) that was practiced in working with him. Faka'apa'apa is truly one of the four pillars of Tongan culture as we look to those ahead of us in the past, whether they are our elders, mentors, or those with more experience, to help guide us in life's journey.

Sonia M. Fonua

I was so excited when Dave asked if I could be involved. I have always wanted to figure out how I can do something useful in Tonga with respect to education. For me, it was really important to ensure that the mentoring relationship was as friendly and supportive as possible. The authors are experts and need to be reassured and encouraged to see that. It is important to share our learnings about how systems work, such as writing articles and why it is important to disseminate knowledge. I really enjoyed interacting with the whole mentoring process, especially as it felt kind, relaxed, and respectful. I feel that the openness and patience about the process, the reality of our busy lives, and the attempts to flatten any perceived hierarchy were really helpful; for example, discussing openly in the mentoring sessions how people were going and what we were thinking about our collective progress. It is so refreshing to have opportunities to have fun, and enjoy and look forward to activities. I only wish I knew more Tongan words to describe what I want to say. I am so grateful to have been able to take part in this wonderful opportunity.

David Taufui Mikato Fa'avae

My reason for taking part in supporting the TIOE and the Tokoni Faiako Tonga Journal of Education was to honour our connections in Tonga. My wife and I volunteered at our church school, Tailulu College from 2015-2020. Prior to supporting the Tokoni Faiako Journal, I had worked for the Institute

of Education (IOE) located at the USP Tonga campus and supported the TIOE Dean, Liuaki Fusitu'a and 'Amelia Fuko-Folaumāhina with the organisation of the Tonga History Teachers' Conference. Dr Seu'ula Johansson Fua raised the critical point about there being so much work to be done back home, but very few people to do it. Seu'ula's sentiment emphasises Māori indigenous scholar Graham Smith's (2012) question that, rather than talking and writing about research from a distance, what have we actually done for the people in the real world? For me, the criticality of Smith's (2012) question is a key reminder as to who research is for and that working with our people, in the community, requires getting our hands dirty (i.e., hard work).

To support the authors in this volume, it required a collective effort. Some key ideas and principles that guided the mentoring with the authors involved generosity and care linked to ue'i e lotoʻ (to inspire), loto toka'i (deeply respectful and reverent, and have an honouring heart), and loto kātaki (patience). I firmly believe that if everyone contributes, however big or small the contribution, our journey continues to move ahead, and in doing so we are more likely to inspire and make changes that would benefit our teachers and students in Tonga. For me, it is about the journey and continuity. Mentoring and leadership is about the journey, perseverance, and resilience.

2.2 How were the challenges in the mentoring process negotiated and mediated?

Robin Siale Havea

As mentioned elsewhere, the mentor's attitude must be very encouraging and positive. At times, the author may be lost and not very sure where to proceed, so those few positive words from a mentor would go a long way. A major challenge is writing and expressing your views as an author in a foreign language; not always easy especially when you try to capture the context and reflect on it. Furthermore, as an author you must bear in mind who is your targeted audience. As such, the mentor must constantly remind the author that it is very important to keep and make the discussion accessible to others because some of the ideas presented could have been adapted from a high level document, for example a thesis or dissertation.

Liuaki Fusitu'a

The challenges that I encountered and felt responsible for was to follow up the authors that were stationed locally to meet the deadlines and to assure the rest of the mentors that the articles will be done. Initial deadlines were made with a week or so extra time up our sleeves as a buffer for possible delays. We were met with delays as people were very busy. An author requested constant "hassling" to ensure that the pressure to complete their article was felt, and due pressure was exerted on that author. Others just needed constant encouragement. Writing sessions were offered, constant face-to-face contact, email, and phone calls offering encouragement helped.

'Ema Wolfgramm-Foliaki

I was assigned to mentor two authors, Fīnau and Steve. I had the privilege of meeting Fīnau at the Tongan Research Association conference in Nuku'alofa in 2018. Steve is currently in the United States where he is a student at California State University and Fīnau is in Tonga while international borders are closed. Covid-19 together with online communications has been the most challenging

aspect of our mentor/mentees relationship. Both Fīnau and Steve have work, family, and study responsibilities which means we have to continually (re)negotiate how our Tokoni Faiako project can be achieved. While work and family remain a priority I feel a sense of responsibility to ensure my two mentees can publish their work. Hence, the idea of offering our authors the opportunity to publish a reflective (and much shorter) piece. I think this is a good idea especially for those that are new to publishing.

Poliana P. Fa'oliu-Havea

I think having an actual team that functions as a literal 'nerd squad' is one of the most effective ways to handle a Pacific, albeit Tongan, virtual mentoring relationship. Especially, as every mentor and author recruited is of the most fun-loving and open caliber. It initially released the pressure of deadlines and the full-on academic anxiety of, "Am I doing this right?" or "What does this even mean?" The affiliation was phenomenal as mentors ultimately created a safe place and space to laugh off the stress and apprehension whilst encouraging and cheering on their assigned author.

I do believe this was the major way in which we got through this all. It does however, reflect the aura of the powerhouse of our team: Dr Dave Mikato Taufui Fa'avae from Waikato University; the MET CEO in Tonga, Professor Tangikina Moimoi-Steen; and the USP Campus Director, Dr Robin Siale Havea. The ease and approachable stance they had in this whole ordeal was absolutely phenomenal, and I think I speak on behalf of the authors because my role enabled the exchange between them, their mentors but more so, the nerve-racking copy-editing process. It reminded me of my doctoral thesis and how I accumulated so much anxiety in the examination process that I somehow forgot these people are also human and only want the best for you, alongside quality learning, education, and research for Pasifika. As a reflective practitioner, I embraced this with certainty because no academic wants otherwise, especially one grounded in Pacific and Tongan learning. I truly believe our dear mentors and authors felt likewise.

Sione 'Ata Siu'ulua

I think with both of us being in different stages of the PhD journey really helped mediate and negotiate the challenges that we came across during the mentoring process. The mentee I was working with was still in his coursework phase while working full-time so we were not able to frequently meet as he was also completing his final exams for the semester. With the other mentees, I had first reached out to them via email but also connected with them on Facebook and we were able to communicate better on the messenger service.
Once we were able to meet, I was able to relate to the strenuous workload that they had been experiencing and we were able to talanoa and engage in relational dialogue. I had been able to mentor them in the paper they wanted to submit and, unfortunately, because of time restrictions and deadlines, they were not able to submit a paper, but they are committed to submitting and publishing their paper in the next Tokoni Faiako Tonga Journal of Education (Volume 3).

Sonia M. Fonua

We have not met in person, only seeing each other in Zoom meetings before I asked to be the mentor on Lōsana's article because of the topic (and her smile). As we had never met, and conscious of the

mentor relationship (and that I am pālangi), I initiated communication through email. We also used messenger to chat and check in and to video call each other so we could find ways to connect, and build our relationship. Messenger is really useful as a quick way to check in (and see if Lōsana has read the message). It was a less formal way of communicating and helped with the negotiation of the power in the mentoring relationship as we could use emojis. It also was how I found out she was off to Vava'u to support maths education for a month (or two) half-way through the mentoring process; messenger enabled a faster, portable communication. We also used video calling early on to discuss what was needed around the first piece of writing. It helped to be able to reassure and explain what the first piece was to be and how to structure it (we started to use Google docs, but it got too complicated).

David Taufui Mikato Fa'avae

Maintaining relationships, personal and professional, takes careful navigation. I have a certain kind of style of mentoring which does not necessarily mean the person I am supporting agrees or even considers as being important. I knew it was going to be a struggle to support and encourage (mentor) from New Zealand, but knowing that Liuaki, Poliana, Robin, and 'Ata were physically located in Tonga with 'Amelia, gave me hope the mentoring support would work. Even though I am not physically located at the IOE, their ongoing support with the copy-editing process and mentoring of certain authors empowered me to continue to move ahead.

Our talanoa or conversations with the authors moved into the virtual/digital space. Also, the use of digital technology, for instance, email, Google docs, Facebook messenger, Google hangouts, supported the mentoring process. The digital technology worked to an extent, but the main reason things worked out was because we could rely on our fellow mentors in Tonga to help out when all else, including technology had failed. Having utilised various modes of communicating with 'Amelia i.e., email and Facebook messenger helped better understand her progress. We also utilised Google docs which helped alleviate some of the 'not knowing' about her progress. Asking Liuaki to get in touch with 'Amelia gave me hope she would pull through and submit her article for review, amendments, and publication.

3. *Sio ki he Kaha'u´* | Looking Ahead into the Future

'Ana Maui Taufe'ulungaki (2014) claims, to look forward or into the future we must look back to our past. Our collective reflections have unfolded the challenges and possibilities experienced through the mentoring of MET officials. Although mentoring in Tonga is an informal practice woven through relevant leadership and cultural traditions (Fuko-Folaumāhina, 2018), its real potential lies in the collaborative exercise between Tongan scholars locally and from abroad. In addition, technology and digital tools, when used well, can provide facilitation of the mentoring and writing for publication. Overall, it is the *vā māfana* and generosity of spirit that maintains the collaborative understanding and partnerships.

4. Acknowledgements

We wish to acknowledge Dr 'Ana Maui Taufe'ulungaki for her ongoing efforts to lead and mentor countless Tongan scholars back home and in the diaspora. 'Ana Maui's legacy of service and her

commitment to empowering and inspiring many, transcends through the REAP initiative and to the collective efforts within the mentoring exercise. We also wish to acknowledge the CEO of MET, Professor Tangikina Moimoi-Steen for her leadership and commitment to the groups involved. As well, we must acknowledge Dr Seu'ula Johansson Fua and the IOE for their efforts 'behind the scene' which got us to the finishing line.

Mau 'ofa lahi atu!

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2

Factors Influencing the *Faiako Ma'a Tonga* Professional Attitude Formation at the Tonga Institute of Education

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Abstract

This paper presents findings from a research into the *Faiako Ma'a Tonga* (ideal Tongan teachers) views on what influenced their professional attitude formations while they attended the Tonga Institute of Education (TIOE). *Faiako Ma'a Tonga* (FMT) teachers, as teacher trainees, are imbued with qualities typically valued by Tongans, such as *anga 'ofa* (compassionate and loving nature), *anga fakatōkilalo* (humility), *faka'apa'apa* (respect), and *fakamaileua-he-fatongia'* (committment and going the extra mile in executing one's teaching responsibilities). This study employed a mixed method research design complemented by a *Kakala Mo'onia Pedagogical Positive Deviance Research Model* with a pre-survey, and survey used as data collection tools. The findings reveal three key factors perceived by FMT teachers to have influenced their professional attitude formations: the TIOE lecturers, courses, and the FMT relationships with important others at the institute. It is suggested that a strategic plan of action be used to reinforce these factors at the TIOE to promote teacher trainees' professionalism, positive attitude formations and to enhance quality attitude development capabilities.

1. Introduction

In Tonga, the erosion in teacher attitude, commitment, and professionalism has been recognised (Johansson-Fua, Manu, Takapautolo, & Taufe'ulungaki, 2007; Matafahi & Fusitu'a, 2009; Tapa'atoutai-Teisina, 2020; Taufe'ulungaki, 2012; 2013; Thaman, 1998). To address this issue, the Tongan government through the Ministry of Education and Training (MET) granted a PhD study (Tapa'atoutai-Teisina, 2020) opportunity which has now been completed. This doctoral thesis advocates the need to have in-depth and a more holistic understanding of Tongan teachers' professional attitudes: *what they are, how they are understood, and how they were formed and strengthened*. Attaining such understandings is viewed as the initial step towards an empirically informed attitude and professional attitudes' enhancement programme for government school teachers.

The findings shared here are not exhaustive, but provide a brief description of the FMT understanding of professional attitudes formation. The perspectives highlight the key factors FMT found effective in their professional attitude (PA) formation whilst at the TIOE.

2. Literature Review

This section discusses the literature around key concepts considered in this paper: teacher quality, attitudes and professional attitude formation, teacher education, and *Faiako Ma'a Tonga*.

2.1 Teacher Quality

Internationally, the need for educational reform to achieve societal goals through improved student learning outcomes is a common theme. Most educational reforms are informed by agendas such as globalisation and educational marketisation, postmodernism and the political push of neoliberalism ideologies, or the role and relevance of technology in an educational setting (Evans, 2008; Hargreaves, 2000). The achievement of educational reform is not straightforward as it is contingent upon many and varied aspects of education. One aspect of education that has become a priority in educational reform for many countries worldwide since the turn of the 21st Century is teacher quality or professionalism (Hargreaves & Goodson, 1996). However, teacher quality is a complex, multi-dimensional and multi-faceted phenomenon and improving teacher quality is far from easy since it involves unpacking and dealing with a broad range of factors contributing to teacher behaviours, attitudes, and practices.

Hargreaves (1994) provides a useful way forward by pointing out that teacher quality is closely linked to their professional growth. Evans (2011) expands on this work but argues that effective, professional development initiatives or policies intended to enhance teacher quality must also incorporate mechanisms for achieving intellectual and attitudinal development along with behavioural development. She believes that unless teachers' "attitudes and ways of thinking are changed – that is, hearts and minds won over reformers' outcomes would not be fully enacted as desired" (p. 867). Here Evans is advocating for a more holistic transformation, encompassing intellectual, behavioural, emotional, and attitudinal dimensions as a more promising way for promoting and achieving the reform agenda.

Like other developing countries, Tonga seeks to improve the quality of education with a vision that Tongan education be "nothing short of a world-class education system" (Ministry of Education, 2004, p. 13), and that "The people of Tonga will achieve excellence in education that is unique to Tonga" (Ministry of Education and Training, 2013a). In its 2012 report, the MET acknowledges the pivotal role of teachers in realising this vision:

> The Ministry recognises that the quality of the teacher is the most important factor in improving students' outcomes and the quality of education. … there is a need to reform the Tonga Institute of Education (TIOE) to ensure the provision of quality services to improve the quality of teachers in Tonga… (p. 105).

In an address to *Pacific Heads of Education System Leaders* (PHESL) in 2013, Tonga's former Minister for Education Dr. 'Ana Maui Taufe'ulungaki identified the improvement and raising of standards related to teachers' attitudes and professional commitment as the 'missing link' that will make real differences in the performance and achievements of students:

> The biggest challenge that Tonga is facing today in education is not limited funding or ill-trained human resources, but poor attitude and lack of professional commitment. If

> we can raise teachers' and staff's morale, and ethical behaviours, to add to these two initiatives, I believe we could make real differences in the educational outcomes of students in Tonga (Taufe'ulungaki, 2013, p. 3).

Given this concern, my paper explores the PA of teachers who are regarded effective practitioners in Tongan society. The findings articulate their thinking and responses to the TIOE-related factors that impacted their PA formation as FMT teachers.

2.2 Attitudes & Professional Attitude Formation

From a functionalist view, attitudes are formed and developed to help individuals understand the world around them, protect their self-esteem, adjust in a complex world, and express their fundamental values (Triandis, 1971). To understand the world, individuals need concepts to summarise the complex information that impinges on them from the environment, and they need to know how to evaluate these concepts and how to behave correctly about various objects found in the environment. Much of this information is acquired from other people (Bonvillain, 2013; Triandis, 1971). Allport (1954) suggests most of the attitudes held by a person are acquired from talking with their family and friends. Other people or 'important others' (Halloran, 1967) are the sources of information for many attitudes, a critical aspect of attitude formation (Allport, 1954; 1970).

Different professions have diverse sets of professional attitudes (PA) required and expected of their practitioners. Knight (2005) defines a 'professional' as "the expert, knowledgeable, qualified, skilled, and trained" (p. 718). The Collins English Dictionary defines a professional as "extremely competent in a job, and (of a piece of work or anything performed) produced with competence or skill" (p. 1926). The Oxford Mini dictionary (2005) defines it as "of or belonging to a profession; showing the skill of a trained person" (p. 407). Professional attitude here would, therefore, mean the desired or anticipated attitude someone exhibits because one belongs to a certain profession. The attitudes expected would be typical of someone who is an expert, knowledgeable, qualified, skilled, trained and extremely competent at the job.

The centrality of teacher attitude in teacher education literature cannot be over-emphasised. Writers stress developing teacher attitudes as amongst the primary purposes of teacher education. Jacobs (1968) stated that:

> It should be the aim of a teacher education program to mould attitudes that will equip the prospective teacher to deal with the teaching role in a way that will bring the greatest benefit to his/her students in terms of their individual growth toward living in a free and democratic society. (p. 410)

This supports the current Professional Development Framework – *Langa Faleako Framework* (Building a House of Learning for Tonga) for Tonga's teachers where ethical attitudes, values, and behaviours are aspects of professionalism, one of the four areas that professional development activities for pre-service and in-service teachers of Tonga set out to address (MEWAC, 2010; Sanga & Aarons, 2008). While teacher attitudes have gained recognition as a critical feature for teacher education, the literature also acknowledges the significance of teachers' attitudes because of their link to teacher behaviours and in turn to students' success (Kalāvite,

2010; Langer, 2000). Langer's (2000) study found that teacher attitudes contributed much to student achievement, including: teachers' and school administrators' coordinated efforts to improve student achievement; teachers' strong sense of agency; teachers' and administrators' sense of commitment to the profession of teaching; engendering a caring attitude to colleagues and students; and having a sense of deep respect for lifelong learning.

The literature also identifies how teacher attitudes change. Teacher attitudes are learned and improved through professional development opportunities and classroom experiences (Guskey, 2002). Lewin's model assumes that professional development activities could initiate change in teachers' attitudes, beliefs, and perceptions thereby, effecting specific changes in their classroom behaviours and practices and, hence, improve student learning. However, others (e.g., Huberman & Miles, 1984; Guskey, 2002; Guskey & Huberman, 1995). Guskey (2002) argue that teachers' classroom experiences play a greater role than professional development in changing attitudes of experienced teachers.

2.3 Tonga Institute of Education (TIOE) & Teacher Education

Until recently, the Tonga Institute of Education (TIOE) was the sole teacher education provider for Tonga. From 1944 to 1985, the TIOE focused on preparing pre-service teachers for a Primary School Teaching Certificate qualification. In 1986, it expanded its programmes to include a Diploma in Education for Primary and Secondary teaching, but this changed in 2000. In 1999, a New Zealand funded Graduate Diploma in Teaching and Learning was offered but ended due to lack of funding. In 2008, the Early Childhood Education (ECE) Diploma Programme was introduced, and from 2012, a Certificate of Teaching for untrained undergraduate and graduate teachers was offered. Today, the University of the South Pacific (Tonga Campus) also offers certificate and degree qualifications in Teacher Education, and the Wesleyan Mission School System has also established a two-year Certificate of Teaching for untrained teachers. The latter works in collaboration with the Bethlehem Tertiary Institute (BTI) in New Zealand, which has a Bible-based teacher education curriculum.

Improving teacher quality is amongst the key policy areas for Tongan education (Tonga Education Policy Framework 2004-2019, 2004); however, achieving this is neither a simple task nor is it possible without serious consideration of the multi-layered contexts at the TIOE including how factors such as physical, social, cultural, professional, educational, PA, and others' understandings shape Tongan teachers' behaviours, values, beliefs, and attitudes.

2.4 Faiako Ma'a Tonga & Teacher Education

Faiako Ma'a Tonga (FMT) means 'valued/ideal teacher(s) for Tonga'. Inherent in this concept is the understandings that both the educational and socio-cultural contexts that nurtured and supported teachers before and during their training, and in their practice as teaching professionals, provide them with attributes and capabilities to not only meet, but to exceed, the expectations of stakeholders, parents, students, and the Tongan society as a whole. FMT are teachers steeped in the cultural values, norms (Matafahi & Fusitu'a, 2009), and knowledgeability (Wegner-Trayner & Wegner-Trayner, 2015) of the different communities they are part of and of Tongan society at large.

FMT first emerged as an official concept when used in the vision statement of the Ministry of Education's Policy Framework for Professional Development (MoEPFPD) document, published in 2004. Espoused in this document was the MET *Langa Faleako Framework*. To be a FMT is to teach for Tonga; that is, to develop education and promote learning in context through a commitment to the development of Tongan people and the land. "The vision, although simple, is reflective of the multiple layers of values and core beliefs about being Tongan, about the Tongan Philosophy of Education and Tongan notions of development" (Johansson-Fua, 2004, p. 1). Philosophically, "Tongan teachers' knowledge, pedagogy, and professionalism should be rooted in Tongan epistemology" (ibid. p. 1).

The distinctiveness of FMT is linked to teachers' identity as Tongans, where God and Tonga are regarded as their rightful inheritance. Spirituality is central to what these teachers may consider as values (Johansson-Fua et al., 2007; Matafahi & Fusitu'a, 2009; Thaman, 1998). Thus, FMT are not only knowledgeable regarding their subject content knowledge, pedagogies, and ideologies, but they are also Tongan in heart and way of life. Put simply, FMT are imbued with qualities typically valued by Tongans, such as *anga 'ofa* (compassionate and loving nature), *anga fakatōkilalo* (humility), *faka'apa'apa* (respect), *fakamaileua-he-fatongia* (committment and going the extra mile in executing one's teaching responsibilities) (Johansson-Fua, 2009; Johansson-Fua et al., 2007; Matafahi & Fusitu'a, 2009), and demonstrating these in every aspect of their teaching practices.

2.5 Current Perspectives on Faiako Ma'a Tonga Professional Attitudes

Matafahi & Fusitu'a (2009) affirm that teacher attitude and professionalism are aspects of the teaching profession which have been under much scrutiny by the Tongan public in the recent past, saying:

> This is perhaps the most important area for improvement in the teaching profession in Tonga…The subject of the ideal Tongan teacher is increasingly being brought to the fore of Tongan education…educational stakeholders are clamouring to reclaim the qualities of the ideal Tongan teacher perceived to have been there previously but have slowly faded or eroded with time (p. 159).

Johansson-Fua et al (2007) framed this erosion as lack of teacher professionalism, noting that the ideal teacher in the Tongan context is a "teacher who has the desirable attitudes of *fevahevahe'aki* (sharing), *fua kavenga* (fulfilling obligations), *loto tō* (humility), *tali angi* (compliance) and *kātaki* (patience)" (p. 22). Further, this study reveals consensus amongst parents, individuals, and development groups that schools and teachers should also reinforce appropriate '*ulungaanga* (attitudes). Thus, teachers are not just individuals imparting knowledge, but should also demonstrate values, appropriately deal with classroom management issues, and discipline students. Parents of this study were not only concerned with the mind and intellect of the child, but more importantly, the spirit, behaviour, and holistic being of the child. This notion reflects the Tongan holistic conceptualisation of *ako* (education) which is grounded in Tongan ways of viewing things whereby they view the world in a holistic manner (Johansson-Fua et al. 2007; Thaman, 1998). Matafahi & Fusitu'a (2009) argue that it is:

> No longer valid to go through a teacher training programme that equips the teacher just with basic teaching pedagogy and content knowledge but that it is vital to look into the

> values and teaching philosophies of teachers to be consistent with the core values of their culture and in this case the Tongan culture (p. 159).

Based on the above, it is clear that certain expectations are placed on FMT by students, parents, educational stakeholders, and the Tongan society. These expectations are holistic in nature and thus, FMT must be professionally equipped with attitudes to enhance their capacity as role models for Tonga's future. To help teachers raise their professionalism and professional attitudes, there is a need to develop an understanding of Tonga's valued teachers' PA formation, an important aspect discussed in this paper.

3. Methodology & Methods

The study takes both a constructivist and constructionist framing in relation to epistemology, with multiple theoretical perspectives: interpretive, phenomenological, Pacific, and Tongan. A mixed methods research design complemented by a *Kakala Mo'onia Pedagogical Positive Deviance Methodological Approach* (Berggren & Wray, 2002; Tapa'atoutai-Teisina, 2020; Thaman, 2002; Wray, 1972) were used to understand the FMT's professional attitudes. A pre-survey, survey, and *Talanoa Fungani Mo'onia* (Tapa'atoutai-Teisina, 2020; Vaioleti, 2003) were the major data collection instruments. The unique blend adopted in the research design and associated data collection tools ensured their appropriateness and relevance to the study context and enhanced the validity of the data collected, hence, the study in general. Since this paper focuses on the FMTs' PA formation while they attended the TIOE, this section provides only the information relevant to how the data presented in this paper were collected, processed, and analysed.

3.1 Data Collection Tools

To provide the findings reported in this paper, two key data collection tools were used; (1) an exploratory pre-survey; and (2) the main survey. The exploratory pre-survey was informal and intended to provide baseline information about the topic of study. It involved 26 participants, about a quarter of the total number (87) who took part in the study's main survey. This aligns with Ruane's (2005) description of exploratory research, which utilises relatively smaller samples of subjects to allow the researcher to get 'up close' first-hand information (p. 12).

The main survey consisted of 68 items, 66 of which were structured using the Likert scale format and two were open-ended questions. The survey was divided into five (5) main sections. *Section One* focused on the FMTs' understanding of PA. *Section Two* concentrated on teacher professional attitudes formation. *Section Three* looked at the FMTs' professional attitudes strengthening. *Section Four* was tailored specifically to assist in the selection of participants for the *Talanoa Fungani Mo'onia* data collection phase, and the final section, *Section Five* consisted of two open-ended questions, focusing on aspects regarding FMT.

3.2 Participants & Sampling

Due to limited relevant literature on the key concepts and foci of this study, a pre-survey with FMT teachers from sampled schools in Tongatapu, Vava'u, Ha'apai, and Niua Toputapu was constructed. The six sampled schools included mission and state schools.

To conduct this study, an approval letter was first sought from the Prime Minister's Office. Then, the then Chief Executive Officer (CEO) of the Ministry of Education (Mrs Emily Pouvalu), and seven mission school directors – Free Wesleyan Church of Tonga (FWC), Free Church of Tonga (FCT), Latter Day Saints (LDS), Anglican Church, Seventh Day Adventist Church (SDA), Tōkaikolo-'Ia-Kalaisi Congregation, and the Catholic Church Schools – were approached requesting their permission for sampled school(s) from their respective school system, principals of schools, and the selected FMT teachers to participate. The school principals and the members of the school leadership teams were tasked with selecting the best FMT(s) to participate in the study. For schools who had less than 40 teachers, one FMT participant was requested but if over 40, two were invited. So, from the 70 sampled schools, 87 teachers participated in the study's main survey of which 83 returned their survey questionnaire.

3.3 Limitations

The research in which this paper is based was restricted to the context of Tonga. With participants from 70 schools (primary, middle, and secondary schools) from the two main island groups of Tongatapu and Vava'u, both rural and urban areas, government and mission schools, a rich description of the valued teachers' PA understanding, formation, and strength were obtained. The findings provide insights into the valued teachers' PA in Tonga but may not be generalisable beyond this context. Interested teachers and researchers will be able to judge if the findings and conclusions are relevant and resonate with their country's practices.

Another possible limitation is the researcher's own prejudices from having been a teacher and school manager for years in Tonga. For instance, due to the researcher's professional background and familiarity with the research sites and participants, it is possible the researcher might have been influenced towards taking certain things for granted or unintentionally making the participants self-conscious of specific issues (Mercer, 2007) thus, influencing the data. For this reason, data gathering and validation were done using a range of methods enabling both within and between methods triangulations.

3.4 Data Analysis

The purposes of analysing the research data collected were: (1) "to interpret the issues raised by the research question, (2) to understand how the information produced is related to the current body of knowledge, and (3) to indicate other areas for possible study" (Cargan, 2007, p. 229).

3.4.1 Pre-Survey

The three purposes mentioned above reflected the analysis done for the pre-survey. Furthermore, connections were sought between the data provided by the FMTs and the literature reviewed to date. Moreover, the analysis was done with the intention to see what else was there for further investigation and would be helpful in developing the principal survey instrument.

The analysis of the pre-survey data used an inductive approach adopting the first three steps of Marshall and Rossman's (2006) seven steps analysis, which involved "(a) organizing the data; (b)

immersion in the data; (c) generating categories and themes" (p. 156), with further details of the process being discussed later. The analysis involved accessing the participants' responses online, reading and rereading through all, bearing in mind the questions asked. This process was repeated until recurring ideas (themes) emerged and were noted. These emerging themes provided the categorical basis for further and more thorough analysis of the participants' data. The analysis continued but was now done question-by-question for each of the 26 online scripts. Responses were coded into the existing themes, unless newly-emerged ideas did not match the existing ones, thus becoming a new theme.

After completing the first round of coding for all the scripts, further code refining was done. This involved carefully considering all the themes under each of the questions to see whether themes could be further collapsed or merged into other themes. This process continued until the themes were considered exhaustive or could not be further subsumed or coded into any further grouping. Consequently, from the data analysis there were three (3) themes for Question 1, ten (10) for Question 2, twelve (12) for Question 3, and twelve (12) for Question 4 (for further details, see Appendix 1). From the Question 2 data, the pre-survey participants identified the TIOE as one of the factors which had in part influenced their professional attitudes formation in addition to nine (9) other factors.

3.4.2 Survey

The first step in analysing the qualitative survey data obtained from the 83 respondents' rating rationales was transcription and translation to English (of over 50% of the survey transcripts, the rest were in English). The transcription was done with Microsoft Excel 2016. In preparation for the survey data transcription, the Excel transcription platform sheet was prepared by having the respondents and the survey items' codes entered into the spreadsheet as labels, where the respondents' codes were inputted vertically and the survey item codes horizontally. Transcription was then executed script-by-script until all was transcribed. The Excel file was then imported into the qualitative data analysis software NVivo 11 (QRS International). NVivo 11 was used mainly to store, organise data to ease retrieval, locate and sort data with ease, produce visual representations for codes and themes (Creswell & Poth, 2018), and compute the data quickly to obtain a holistic picture. NVivo 11 makes it easier for the researcher to observe immediately which codes (nodes) have been used (Welsh, 2002), and the sources to which they were linked. The next stage was the creation of codes (nodes) related to the research questions. Node creation involved identifying themes, developing nodes related to these themes, and merging nodes into larger themes during further rounds of data coding.

4. Findings

This section presents the relevant findings from the main survey about the FMT responses to three items regarding the TIOE and their PA formations. The survey data are reported here using figures. These are supplemented with explanations and quotes from respondents to illustrate key ideas. Pseudonym codes accompany each quote, whereby respondents are identified as *Mo'onia* and a number (such as *Mo'onia-1*, *Mo'onia-2*, and so forth). *Mo'onia* literately means 'the true one', 'the real one', or 'the one'. The participants of this study, the FMT teachers, are viewed as the *Mo'onia* in terms of their professional attitudes and professionalism. The pseudonyms are used

to ensure participants' anonymity and to honour them as esteemed Tongan teachers and individuals with recognised *Mo'onia* professional qualities. It is the *Mo'onia*'s information, life stories, experiences, and knowledge which inform the findings reported in this paper.

Participants were asked to rate their agreement with the statement on a Likert scale and to give a reason for their rating. Figure 1 presents a 'summary of the results' related to the three items about the TIOE. The use of the term summary of results in the previous statement means the following: The agreement and disagreement rating responses (quantitative results) are presented in summarised form because the 'Agree' percentages as they appear on Figure 1 represent the sum percentages of the 'Strongly Agree' and 'Agree' choices by FMTs for an item. Similarly, the 'Disagree' percentage is the sum of the percentages of 'Strongly Disagree' and 'Disagree' ratings. The 'NA/ND' represents the percentages of FMTs who neither agreed (NA) nor disagreed (ND) with the items as in the case of B11, B20, and B27.

Reporting of the FMT rating reasons (qualitative data) of these items involves an indication of the total number of relevant responses to the item. The irrelevant and non-responses were also noted in the analysis process but were not reported because it was assumed that any possible impact, they may have on the results would be unrecognisable. Rating responses were relevant if they were seen as connected or appropriate to the statement posed, irrelevant when disconnected or inappropriate, and became non-responsive when unanswered. Further, rating reasons such as 'I Agree', 'I Disagree', and 'It's True', without further elaboration were regarded as irrelevant because they were noted as repetitions of teachers' agreement ratings. The categorisation of relevant responses were by themes mainly generated by an inductive means, although a few derived deductively.

From the pre-survey data, participants indicated that the TIOE was a factor contributing to their PA formation. Although not all the FMT studied at the TIOE, the majority did. Therefore, it was of interest to assess the FMT perceptions related to factors with potential influences on their PA development at the TIOE, such as the lecturers, courses studied, and their relationships with important others at the institute.

For these purposes, FMT were given three items (statements) B11, B20, and B27 (see Figures 1, 2, and 3 below). Figure 1 summarises the findings for item B11, Figure 2 for item B20, and Figure 3 for statement B27.

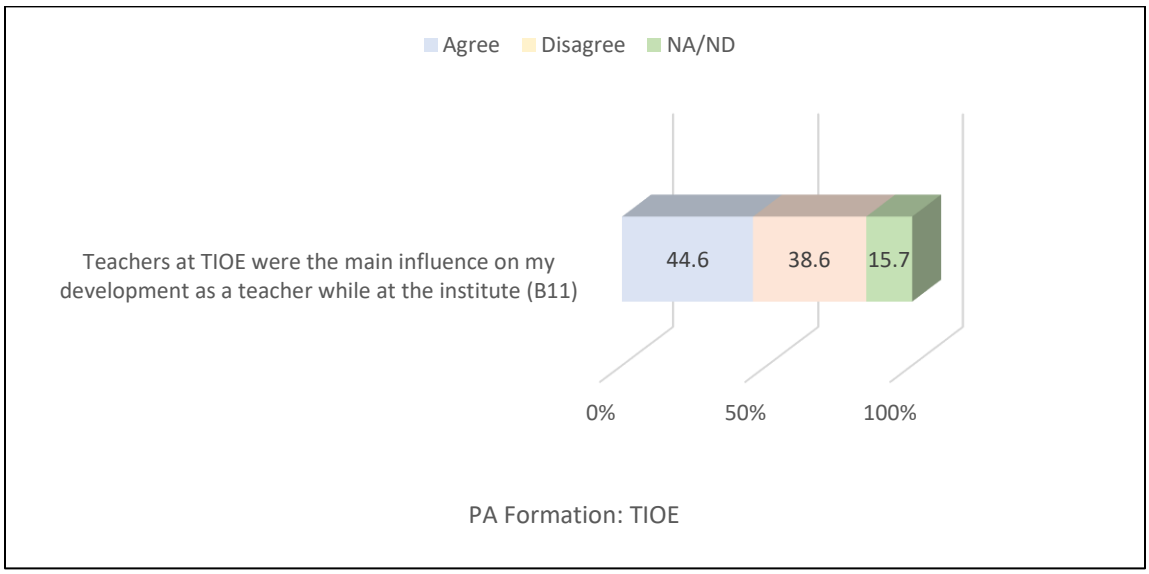

Figure 1: Disagreement & Agreement Ratings of Statement B11

Figure 1 shows slightly less than half (44.6%) of the respondents agreed with B11. Comparatively, a relatively similar proportion (38.6%) of the total respondents disagreed. Of the 66 relevant responses given, 40 reasons were affirmative, 12 disagreement reasons, five indicated teacher training was elsewhere, and two reasons considered high school teachers as more influential in their professional development. Seven were remote reasons.

The affirmative reasons described the TIOE lecturers as: sources of knowledge, motivation, and had pedagogical skills relevant for their teaching careers; positive influencers due to their observed high professional commitment and effort; and effective agents in the FMT professional development. For instance, in *Mo'onia-36* and *Mo'onia-57*'s responses, respectively they each recalled, "I was positively impacted as I repeatedly observed their commitment and passion in nurturing future teachers". "It is who these lecturers were, and what they taught that had helped in my development as a teacher".

Some FMTs also agreed but with reservations. For instance, *Mo'onia-13* recalled attending the TIOE with anticipation of being surrounded by lecturers very willing to help, which she did but a few inclined to prioritise personal agendas over professionalism.

With the FMTs' disagreement reasons (12), some disagreed because they were concerned over certain teacher qualities which included lecturers' biasness and being poor role models. Shorter training programmes was considered an issue hence their disagreement. Others acknowledged teachers elsewhere as more influential in their professional development. In *Mo'onia-4*, *Mo'onia-6*, and *Mo'onia-28*'s disagreement views, respectively they each commented, "Teachers at the TIOE didn't influence my development as a teacher because a year there was not long enough". "Some teachers at the TIOE favoured certain students and relatives, thus doing unjustly to others. That was very discouraging". "Some did not do their best or reflect qualities typical of a FMT".

For Statement B20, "What I learnt from the courses at the TIOE impacted my development as a teacher", 77.1% of survey respondents agreed (see Figure 2).

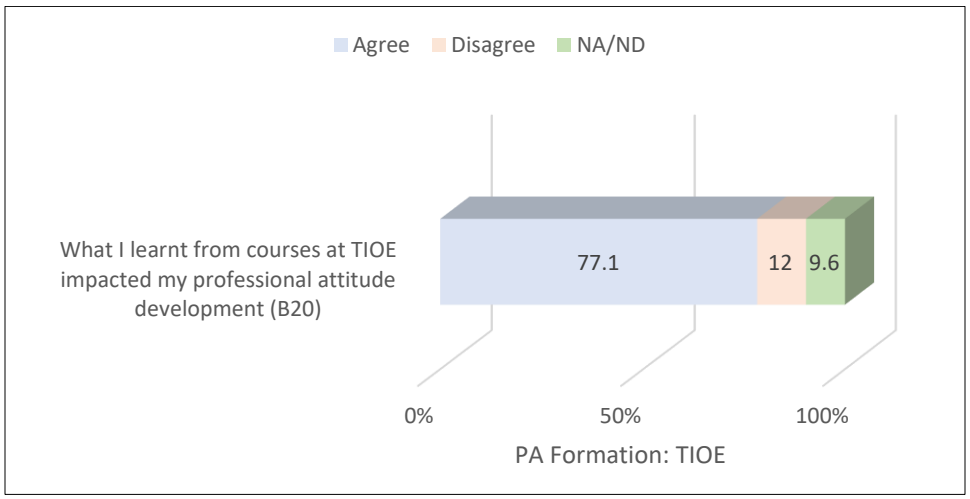

Figure 2: Disagreement & Agreement Ratings of Statement B20

Of the 59 relevant responses, 39 were affirmative. The TIOE courses afforded FMTs: improved PA; enhanced knowledge and skills; professional development opportunities; enriched teaching capabilities and professionalism, assured goals, and others. In *Mo'onia-54*'s view, although the TIOE courses were influential, to her, the positive attitudes and behaviours of lecturers taking these courses influenced her more. In terms of acquiring moral qualities, *Mo'onia-52* commented that "…her acquiring moral qualities came through interactions with students, their parents, and others in the community."

The disagreement reasons, some believed they were not affected by their courses at the TIOE towards PA development. For example, *Mo'onia-41* acknowledged, "What I learnt at TIOE did not impact my attitude development". Similarly, *Mo'onia-81* claimed, "My attitude was developed from home when young and also at church". Further, *Mo'onia-48* thought, "The TIOE was not much different from high school in their degree of impacting my PA development. What I found more influential were my teacher colleagues and school principals with whom I have worked". The FMTs were also given statement (B27), "Relationships with important others at the TIOE contributed most to my professional attitude", to which 73.5% agreed (see Figure 3).

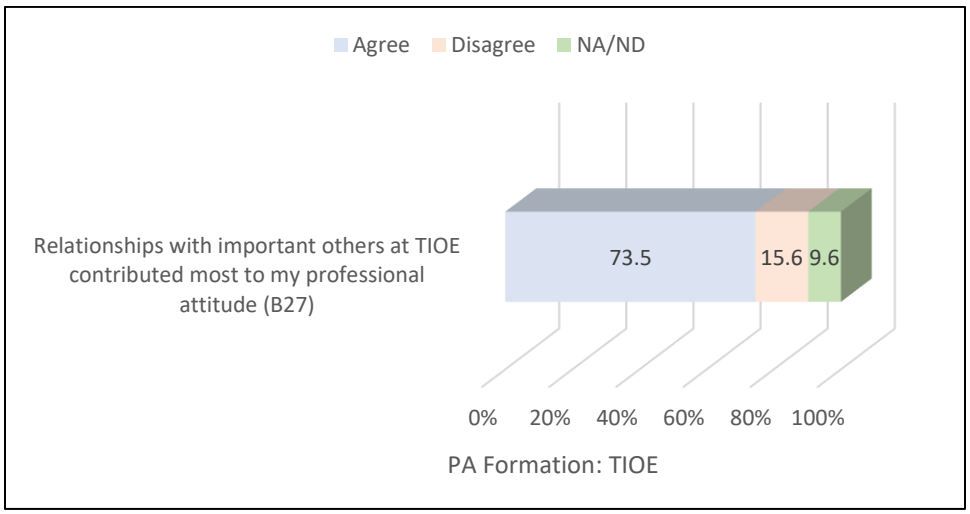

Figure 3: Disagreement & Agreement Ratings of Statement B27

For Statement B27, the FMTs provided 62 relevant reasons. While 73.5% agreed with the statement, their reasons varied. Some of the ideas common from FMTs' affirmative reasons were about teachers being inspired by their relationships with important others to: do their best; loyalty and to be professional; enhance positive working spirits; be obedient, respectful and honest; and be willing to live for others. According to *Mo'onia-23* and *Mo'onia-44*, respectively they reported: "What the TIOE teachers did, they ignited in me a heart to give my best". "It was at the institute where love was groomed in me. I learned commitment, loyalty, and other qualities which I think are the best someone could have".

Some FMT strongly felt these relationships as the biggest contributions to their PA (e.g., *Mo'onia-57, Mo'onia-59,* and *Mo'onia-60*), others like *Mo'onia-56* acknowledged learning from these relationships the importance of working individually towards a goal and found it advantageous to collaborate with one another. *Mo'onia-53*, felt it necessary to indicate to the TIOE lecturers the importance of them considering improving qualities such as their PA, moral, and spiritual values. In *Mo'onia-52* and *Mo'onia-56*'s words, respectively each commented: "…it is crucial for important others at the TIOE to have as part of their professionalism – improved PA, moral, and spiritual values". "Through collaboration with student colleagues and others there at the TIOE I came to understand the importance of working individually towards a goal and collaboration was key".

From the disagreement reasons, some like *Mo'onia-62* and *Mo'onia-78* found relationships with important others as "not helping at all". *Mo'onia-5* and *Mo'onia-49* said there were no important others they related to while at the TIOE.

5. Discussion

The findings show that the TIOE as a teacher training institution is effective in the FMT PA formation, in terms of lecturers, courses taken at the institute, and relationships with important others. Teacher mentors whom some of the participants had worked alongside with during their first year in the field were also noted as amongst the most influential for some of these teachers. Further, the FMT focussed more on the TIOE lecturers' behaviours and their impacts on their PA formation, while little was mentioned about the lecturers' preparedness, pedagogy and professionalism. These finding are consistent with the findings from Matafahi & Fusitu'a's (2009) study where the participants did not indicate any concern with the lecturers' pedagogical and content knowledge capabilities, rather their concern was more towards the lecturers' moral and behavioural demeanours.

Also affirmed by the findings was that the length of the diploma programme undertaken by study participants is a contributing factor to the FMT effective PA formation. The FMT mentions the brevity of time at the TIOE could be an indication of their concern about some of the TIOE programmes where teacher trainees could gain qualifications in one or two years only, but not as the normal programme where teachers complete a diploma qualification in three years. The FMT findings indicate that for PA to be formed and manifested, time is needed and, therefore, the intensive short-term teacher training programme offered for a year or two may not be as effective as the longer-term diploma programmes that enable the development of certain PA for teachers. The development of lasting professional qualities requires time, and for them to be stabilised and thrive, loving care is needed.

The TIOE courses were considered helpful in informing PA formation, because these courses provided many benefits such as enhanced knowledge and skills, improved PA, professional development opportunities especially for in-service teachers, reassurance of working goals, and being better equipped to teach. Also, the lecturers being good role models both behaviourally and attitudinally had positively impacted PA development. While it is necessary to acknowledge the TIOE courses for their positive impacts in effecting certain positive qualities, the positive role modelling capabilities by lecturers taking these courses add weight to the effectiveness of these courses in promoting PA development. This finding adds to the body of literature which acknowledges the criticality of role modelling to personal growth and development, career success (Girona, 2002; Ross, 2002), and professional development (Gibson, 2004) of concerned personnel like the participants of this study.

The FMT relationships with important others at the TIOE was shown to have been impressive in effecting certain PA formations. The significance of relational ties amongst social beings such as human beings cannot be overstated. This notion is widely acknowledged in both Western, non-Western and Pacific literature (e.g., Bronfenbrenner, 1979; Johansson-Fua et al., 2007; Kalāvite, 2010; Kētu'u, 2014; Matafahi & Fusitu'a, 2009; Paea, 2015; Vaioleti, 2011).

6. Conclusion

Based on the above findings and discussions, it can be concluded that the valued teachers of Tonga who participated in this study affirmed that their TIOE lecturers, courses taken at the institute, and their relationships with important others while at the TIOE have been influential in their PA formation. The TIOE lecturers were understood to have positively impacted the FMT PA development, particularly when they were role models in terms of the professional qualities they demonstrated and lived out daily as they interacted with the FMT participants. Lecturers who were perceived to be biased and not having the professionalism anticipated by the FMT had minimal impact on the FMT PA formation.

The TIOE courses were affirmed to have positively impacted PA development. Length of courses and the FMT programme of study were noted factors in effective PA formation. It is likely that the PA formation needs time and quick fixes may not work in effecting the formation of certain PAs successfully for pre-service and in-service teachers.

The FMT also affirmed their relationships with important others at the institute enhanced their PA development. So, to ensure the TIOE will continue to be a place where students and lecturers find a sense of empowerment regarding their PA and professionalism, it is recommended that the TIOE should consider the key findings presented in this paper and consider how they could ensure these three areas are strategically reinforced so that they will continue to be successful cornerstones to pre-service teachers' PA formations.

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3

Fīfī Ika Maka: Valuing Mentoring and School Leadership in Tonga

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Abstract

This article is a summary of my master's study which focused on the mentoring experiences of school leaders in the Tongan context. As a qualitative descriptive study, the leadership experiences of five school leaders were captured and the usefulness of metaphors and cultural knowledge in their leadership practices was highlighted. The shift to highlighting Tongan indigenous cultural knowledge and practice led to the development of the *Tolonaki* which emerged as a framework encapsulating effective mentoring processes for school leaders in Tonga. Though the leadership and mentoring practices of school leaders in Tonga are predominantly informal, the study reveals the significance of metaphors as critical cultural knowledge that enables deep analysis and understanding of leadership and mentoring practices within the formal context of schooling in the Island Kingdom.

Key Ideas

- *The mentoring of school leaders and teachers relies heavily on informal training and knowledge by role models;*
- *Talatalanoa and observation and doing are valued practices when thinking about mentoring and school leadership;*
- *Tongan metaphors highlight multiple meanings linked to nurturing leadership through collaborative and communal engagement.*

1. Introduction

The mentoring of school leaders as well as teachers in Tonga is significant and requires commitment and dedication. My use of *fīfī ika maka* in the title of this paper is to draw from the proverbial and figurative language, knowledge, and deep meanings from our ancestors. Literally, *fīfī ika maka* is the cooking of fish from the deep ocean (*ika moana*) wrapped in leaves which are plaited, hence the *fīfī*, and baked in the *'umu*. Wrapping in this way keeps the fish moist with beautiful texture. In the absence of formal mentoring of school leaders and teachers currently in service, many rely on their own cultural knowledge and the knowledge of other school leaders for guidance. If we value school leadership in Tonga then mentoring should be valued as well.

In the past, teaching in Tonga was highly regarded that families encouraged their young to pursue classroom practice. Teachers were seen as knowledgeable and their advice and counseling was held in high regard by village elders and the society. Such was a teacher's significance that those who were sent to the outer islands of Tonga were given basic training in medicine including how to assist in childbirth. This was often the kind of weighty responsibility placed on a teacher's shoulders. The teacher was part of the community whereby not only were children taught, but

there was reciprocity in the sharing of ideas and knowledge. Respect and humility were key to maintaining this relationship in the communal setting.

Given the changes in the teacher's role and the professional expectations required of practitioners, despite their professional training, many continue to struggle in their practice. As reported by *Teachers and Education in the Pacific* (TEP), 2007, amongst the many challenging issues are teacher supply, resources, equity, funding, and the relevance of teaching materials to the curriculum for Pacific Island teachers "*Teacher quality remains the key issue for teachers and teacher education in Tonga. Support is needed in the development of teaching materials and resources that are contextual and are specifically developed for the needs of Tongan teachers and their students*" (Johansson Fua & Sanga, 2007. p. 157). The support for teachers in Tonga requires a Tongan approach that significantly meets the needs of Tongan teachers.

At a recent Tonga Institute of Education symposium in Nuku'alofa, the former Minister of Education, Honourable 'Ana Maui Taufe'ulungaki (2020) questioned the future of the Tongan language. She stated:

> *When the language dies, a culture dies,*
> *When culture dies, our stories die,*
> *When our stories die, our connections die,*
> *When our connections die, our identities die,*
> *When our identities die, we will truly be lost people* (*talanoa*, 24, June, 2020)

The loss of language can lead to losing other things that are dear to an island nation and for Tonga, our aspiration should be to avoid this. As Tongan teachers we draw from the wisdom of the past to enhance our current practices and sustain our cultural identity. The application of Tongan knowledge systems within research can empower change and shift to providing practices that are more promising.

This paper draws from my master's research which focused on the concepts of mentoring in the form of metaphors by Tongan school leaders. As a former school leader and classroom teacher, I had minimal professional training in the workplace to develop confidence and competence as a school principal. It was a role that was characterised more by "trial and error" experiences. I picked up on some best practices and sought the counsel and advice of family and key role models. The journey helped me realise that although we as teachers come equipped with knowledge of subject matter, what we really need is the affirmation that what we can and do will produce results. This is mentoring and the role of metaphors in the research will enable critical thinking that will lead to transformative practice.

2. Literature Review

The review of literature provides a background of the Tongan education system from its early beginnings to its current system. It also discusses indigenous Pacific knowledge and practices including Tongan knowledge systems and the metaphors that derive from this. Finally, it deliberates on the teaching, mentorship, and leadership roles of teachers in the classroom.

2.1 Tongan Education System

The Tongan education system has its origin in the British education system as begun by the early missionaries. Today, it closely follows that of the Australian and New Zealand curriculums with the English Language as the main medium of instruction and learning including that of assessment. The Tonga Ministry of Education and Training presides over both government education and the education provided by the Church Missions. Access to education ranges from Early Childhood Education, Inclusive Education, Primary, Secondary, to Higher Tertiary Institutions including technical and vocational institutes as well as a Tonga Campus of the University of the South Pacific for undergraduate and postgraduate studies.

2.2 Indigenous Pacific Knowledge & Practices

This article draws upon the existence of indigenous knowledge systems (IKS) as a significant contributing factor to the teaching and learning practices of our Tongan teachers. It highlights Tongan traditional knowledge and skills that can be useful in the teaching field. Anuik and Gillies (2012) acknowledge how indigenous knowledge and practice "can strengthen teachers' pedagogies regardless of the cultural or racial identities of the teachers or students" (p. 75).

In this paper, my use of the term 'traditional knowledge' is linked to knowledge and practices inherent in indigenous Pacific knowledge systems. The implementation of traditional knowledge through indigenous knowledge systems was the way of teaching and learning and transmitted throughout *to'utangata* (generations) Tonga (Thaman, 1995), where young ones learned from their elders and then passed on their knowledge and experience to their own children. Families were the cornerstone in enabling the transmission of such knowledge whereby, through socialisation, the knowledge is shared and shaped within the community, affirming one's expertise. The learned skill is seen in the simple task of knowing how to make a fire to that of building a *Kalia* (double-hulled canoe) for warring purposes.

The indigenous Pacific knowledge system is a continuous cycle of passing on significant knowledge and skills for the survival of a people and nation. The continuity of a society depends on the application of traditional knowledge "*Indigenous knowledge is a lived knowledge meaning that you must practice what you know and be what you do. There is no distinction between living and working. Indigenous knowledge is a way of life*" (Absolon, 2010. p. 85). Doing what is meaningful and relevant to one's life and work makes it a promising practice.

Consequently, the history and experience of our *to'utangata*, generations of people before us and whose records and traditions we carry, can prove useful in our learning. There is a strong connection and binding of relationships rooted in the way of knowing and doing things. For instance, metaphors highlight social and cultural knowledge and practices that empower thinking thus, altering practices. Traditional knowledge brings about a shared sense of responsibility to "*learn from indigenous experience new solutions to the same problems, constituting a contribution to universal culture*" (Helu, 1999. p. 232).

The *Tolonaki* approach can be deemed as a relevant alternative to understanding issues commonly faced by teachers as they pursue best practices. The approach centers on Tongan language and brings to the fore the collective works of our forefathers who in their constant and continuing

efforts have shaped their own practices. The practice of *Tolonaki* affirms and ignites teacher confidence and competence. These are required aptitudes in the teaching profession and are highly significant. When perfected, these skills stand the test of time and are long lasting, meaningful, and relevant to the culture and growth of Tongan contemporary society (see Fuko-Folaumāhina, 2018).

Much is to be gained also from the knowledge and expertise of indigenous peoples around the world. We see across the continents the unique traditions and way of life of other communities. The communal practices of these nations bring a holistic structure to the way individuals function in the society. According to Absolon (2010), native cultures have a strong bond with their natural living environment and portray this in their song, dance, and rituals. Lessons are learned from the environment and values are created. Emphasis is placed on the relationship between the heart, mind, and soul and there is the acknowledgement and acceptance of the spirit and divinity. This is also reiterated by Tongan scholar, ʻAna Maui Taufeʻulungaki (2014). However, incorporating the indigenous mode of learning into the formal settings of the classroom remains to a large extent, uncharted territory. This type of traditional learning is generally seen to be obtained and taught only in the informal settings of the home and cultural environment. Concerted efforts from teachers and school leaders are required to enable the continuity and recognition of Tongan traditional knowledge as being viable learning in formal education.

It is imperative to provide an opportunity to incorporate indigenous knowledge in formal education if we are to enhance teacher practice. Just as in the informal learning environment, modern day classrooms can benefit from the teachings and learnings of the past. Together these ways of knowing enable teaching and learning "*Indigenous ways of knowing (epistemologies) are complementary, not oppositional, to Western epistemologies*" (McGinty, 2012. p.13). Present day teacher knowledge and skills can be supplemented by traditional ways of doing. Our children can benefit from the best of both worlds.

2.3 Teaching, Mentorship, & Leadership

As leaders in the classroom, teachers do need to feel empowered. At the same time, mentorship will help sustain teacher competency. The constant shifts and changes in practices require continued robust, relevant, and meaningful support. The vibrant and rich cultures of the Pacific Islands can be a supportive tool in developing teacher practice. A recurring theme advocated by Pacific indigenous educational leaders is:

> the need for us, Pacific Islanders, to go back and examine our various indigenous notions of education … in order to see how it might be possible to salvage our educational institutions, and bring about changes to our formal education systems that incorporate our indigenous notions of education as well as those cultural values which have nurtured our societies for millennia (Thaman, 1995. p. 732).

As identified in my master's thesis, the *tolonaki* approach can strengthen teacher competency (Fuko-Folaumāhina, 2018). Teachers are at the forefront of a very critical time in educational leadership in Tonga today. The sudden and abrupt change in 2016 to an unstable outcome-based curriculum and assessment has not helped. Outcomes of the national examinations still reflect a school's competence to deliver good and quality education, in which the role of the teacher is

critical. Parents and the community still believe the success of a school is determined by the results that the exams portray despite all other factors that account for this. In a small island community this is an overwhelming and difficult task to shoulder and teachers are burdened to meet such expectations. Their need for support that is contextual and sustainable is crucial now more than ever.

3. Methodology

The research sits within an interpretivist paradigm. The aim of the study was to explore and understand participants' lived experiences and the ways they construct meanings and interpret their experiences (Guba and Lincoln, 1994). In doing so, a qualitative approach was undertaken seeking to conceptualise leadership and mentoring using the participants' perceptions. The Kakala Research Framework underpinned the research process.

3.1 Research Focus

In terms of research goals, the primary research question for the study was: *How do Tongans conceptualise mentoring?* Three sub-questions were developed to unpack the primary question:

1. What are the beliefs and values associated with mentoring and leadership?
2. What are the traditional processes of mentoring school leaders in Tonga?
3. How might traditional or indigenous Tongan mentorship be applied to school leadership contexts?

3.2 Talanoa Method

The *talanoa* method was used to capture and uncover school leaders' experiences, particularly their understanding of mentorship in their school leadership responsibilities. *Talanoa* was chosen as it was appropriate to the study and is relevant to the Tongan cultural context where the researcher listens attentively to the participants. It also allowed for the observation of proper cultural and ethical protocols.

3.3 Data Analysis, Coding, & Participant Selection

According to Miles, Huberman and Saldaña (2014), the strengths of qualitative data depend on the competence with which the analysis is carried out. The authors further contend that qualitative data collection and analysis takes place simultaneously and systematically. Data triangulation was achieved via the *talanoa* data of the participants' stories, discussions with the researcher's critical colleagues, and the researcher's own experiences as a former secondary school teacher, principal and educational officer in Tonga's Ministry of Education and Training.

Coding of data was employed; in particular, axial coding. The participants were drawn from educational leaders who were predominantly educated in Tonga and sent overseas for further education. They are former teachers turned school leaders and now, all are currently in educational leadership positions at secondary schools, the Ministry of Education and Training, or university institutions. These leaders were chosen because of their years of experience. A

gender mix – three females and two males – was also considered as well as the church education systems that exist in Tonga.

4. Findings

As a result of 'coding chunks of data' (Creswell, 2014 cited in Fasavalu, 2015) obtained from the *talanoa* with the participants, three key themes emerged. The key themes aligned with the literature on mentoring school leaders. The overarching themes are: indigenous mentoring concepts and principles; mentoring practices and strategies; and indigenous metaphors.

4.1 Key Themes

4.1.1 Theme 1: Indigenous Mentoring Concepts & Principles

> *[It's] things that worked or seemed to work in the Tongan context and the vā faka-Tonga (relational ties between Tongan people) and those not fakapālangi (European way). (Leader 1)*

> *We need to do what we are familiar with, ala anga mo tautolu, and our lives and the way we live. (Leader 5)*

Both leader 4 and Leader 5 proposed indigenous Tongan as opposed to *pālangi* (Western) concepts and principles that were useful in their learning when they were school leaders. As described by Leader 4, he believes that traditional mentoring practices that are contextually embedded in Tongan values and beliefs is an appealing option rather than having something being brought from a foreign place. Leader 3 claims that Tongan legends and anecdotes are in themselves mentoring strategies or knowledge because Tongan people have from the beginning always been oral learners and have relied on this to teach their leaders.

***Tauhi Vā* (nurturing relationships)**

> *You must have certain core values to maintain the relationships that you have with others. I think it's absolutely essential, love in your heart, in Tonga of course the most important thing is 'ofa and then from 'ofa you generate respect and humility and commitment and reciprocity so without the foundation of love to drive and maintain and to promote and to sustain relationships there is no you, no society. (Leader 3)*

Leader 5 reports that she believes that for effective mentoring to take place, learning experiences should be based on reciprocity and strong relationships of trust and care. This is a valued practice. For example:

> *The [mentoring] relationship is very important to happen, to be established in the learning experience of that person who is mentored and to the person doing the mentoring.*

Value-Driven

The personal attributes and personality traits of the mentor or the expert have to be rooted in these indigenous Tongan values of the *Fāa'i Kavei Koula* (Four Golden Waistbands) and exerted by the individual before mentoring could occur. This was a recurring response of the participants.

We need to be able to show the value that we are adding to the kids…that's how we were traditionally mentored; this is the way we were. (Leader 4)

So the way we live in Tonga there's respect and all that. It has its values; mamahi'i this thing, this work. There are some who mamahi'i e ngāue (loyalty to work) and respect, tauhi vā (nurture relationship) just comes in the Tongan way. (Leader 1)

Spiritual

Throughout the whole Tongan philosophy and the way we do things the spiritual aspect was a very critical one, and that everything we do is linked to our spiritual beliefs. (Leader 3)

The main thing that gets me through is prayer. I pray for decision making that is just and true faitotonu. When something happens, I quickly try to check with God. (Leader 5)

All of the participants valued their own prayer lives in their leadership roles and were empowered by their actions based on spiritual faith to lead and teach others.

Evolution & Change

[traditional mentoring] didn't fall out of the sky; it was refined over a long time. What we know now somebody came up who was mentored by his father for something. He progressed that skill even to something that was even better. Traditionally our knowledge has been passed down. (Leader 4)

According to Leader 2, the mentor should not expect instant results. Training a child would require providing attention to all the factors that influence their learning, hence time is needed for this. An example given was the introduced agricultural knowledge and skill of permaculture for farmers, and yet this skill is not new because it had begun with our ancestors. Through the generations the skill was passed down, refined, and progressed till it became something better.

Mālie, Māfana, & Maama

One way of replenishing your supply of 'ofa' when you, after observing and helping you get the māfana, so you have a deep satisfaction and fulfillment from watching others grow the emotional happiness you get when seeing the other person grow. It makes it all worthwhile, you then get the mālie when you watch somebody perform - you have made some difference in their lives, each one leaving a healthier plant, healthier human being. (Leader 3)

Over half of the participants, which include Leader 3, acknowledge that the person they will mentor will surpass them by accomplishing more than what they (the mentor) could and it will be their joy to see their mentee reach such a stage.

4.1.2 Theme 2: Mentoring Practices & Strategies

Talatalanoa

According to the participants, *talatalanoa* is a practice that implicates the mentor constantly re-telling good things to the mentee whilst at the same time discussing and sharing ideas and information. Moreover, the mentor provides instructions for the mentee to reflect about their

leadership practice. The dialogue that transpires entails *fakahinohino* (to direct), *femahino'aki* (mutual understanding) and *talanoa'i* (talk about it) in an intimate relationship that has been developed and valued. It is a relationship that also has standards and the mentor applies this in her/his telling of instructions and guidance.

> *Tongan mentoring is about sharing, talatalanoa (guidance and growth), akonaki (wise teachings), fa'ahinga tokoni (advice, some kind of help). (Leader 1)*

Leader 1 in the quote above, describes *talatalanoa* as being linked to other Tongan practices such as *'akonaki and fa'ahinga tokoni'* as ways of mentoring. The continued talking over things also opens up the opportunity for questioning and making things clear. It is all about *pōtalanoa'aki* meaning there is a close face-to-face interaction as there is a purpose in the talk that is undertaken. The *talatalanoa* approach allows for decisions to be confirmed and consolidated and is not rushed or hasty. It also avoids control by one person over the other and enables continued sharing for the good of the whole.

Observation & Doing

All participants in this study noted the traditional learning approach where the mentee watches, observes and does what is being taught (Thaman, 1992). These are practices valued in learning by *observation and doing* such as in the building of a canoe in the days of old. Leader 4 emphasises that there are certain skills that cannot be taught by talking alone. It has to be lived: "*advice only won't or will never be able to change the child's attitude until he sees his father drenched in the rain at sea on stormy days; then something in his heart will be moved*". The son sees the sacrifices as the father models an important value of *mamahi'i me'a* or *mamahi'i fatongia* to loyally undertake the task and see it through for the survival of others depend on your success.

In addition, Leader 2 views the mentor's life as an "*open book*". This idea of the good role model was reiterated by the participants based on the characteristics and demeanour of their own mentors. The majority of the participants' lives and work shone through to their mentees because they openly practiced their values and ideals in their work as school leaders.

4.1.3 Theme 3: Indigenous Metaphors

The application of a variety of chosen metaphors by the participants is portrayed here. They have used metaphors to show the value of mentoring as a valued practice in Tonga. The metaphors themselves embody key learning as shared by the participants. As stated by Leader 2, the use of metaphors "*depends on your own perception of what a metaphor is, or of what mentoring should be".*

***Pununga 'o e Mo'ui* (nest of life)**

> *Under the wings of a bird, the idea of the mother bird nurturing the baby bird in the nest giving them all the warmth and then once they are able to fly we let them fly… it's the idea, you go in and be a part of somebody's life for however long they need you, and then when he or she can fly then they fly and those people are still there, you're gone off looking for another nest; you're not really mentored forever by any one person. The mentor should be able to let that person go with their good wishes. Hopefully one day you'll see them and they will have picked up something, however short that contract was, it's*

still mentoring because the mentee recognised that they needed that contract and made use of it. (Leader 2)

Fetākinima (grabbing hold of another's hand)

So with fetākinima, it is a relationship then guiding them to that place that you want and we used fetākinima so when he holds you he has to accept the mentoring that will be done to him and then the mentor will grab hold of him and take him to the place where we want him to be at. Then you can pull him up from where he is currently at to this other place. In my view, mentoring is that you have a purpose, there's a place you want to get this person to, and we need mentoring because we will have to reach out at times and grab him by the collar [said with humour] and pull them over, so with fetākinima it is a relationship. It's like establishing a relationship with that person, then guiding them to that place you want [them to get to]. (Leader 4)

Ngoue Tapu (Sacred Garden)

[Consider] everyone in your organisation in terms of a garden. Each one in your organisation/in your garden will be different. Each one is a plant. Ensuring that the plant grows and contributes something different to the overall beauty and ecstatic value – even the functional value of that garden – each one must be nurtured to be healthy. Each plant requires a different treatment because not all of them will be the same. So if you can think of your staff [as] this is your family; think of each one as a child whose needs would be quite different from any other. They need space and time to develop their full potential. When they do then your garden will become quite a paradise, a garden, of Eden; it will become your showcase. (Leader 3)

'Olunga 'aki e Kaliloa' (to lay your head using your mother's forearm as a headrest)

'Olunga 'aki e kaliloa' is some form of traditional mentoring. (Leader 4)

Metaphor of own children – it's unconditional love. Despite whatever it is that they do, if you have a strong foundation in the family it doesn't matter what the child does. He or she is still a member of that family and he or she will still be entitled to unconditional love and support. It doesn't end when they leave home, go off and get married and start families of their own. No, it only ends with death. (Leader 3)

Those three things if it [mentoring] can be compared to something empowering, holistic, relational. (Leader 5)

5. Discussion

To understand mentoring and leadership, Tongan concepts and traditional practices provide culturally relevant and meaningful ways (Thaman, 1995). *Talatalanoa* and observation and doing were identified by the five leaders in the study as culturally appropriate practices and strategies that allow for mentoring to take place (Fuko-Folaumāhina, 2018). These practices are governed by values like *tauhi vā*, *faitotonu* (just and true decisions), *mālie*, *māfana*, and *maama*. The five leaders shared how their spiritual faith and spiritual belief supported and empowered the *talatalanoa* and observation and doing practices of mentoring.

Tongan metaphors provide deep learning and understanding of why and how leadership can empower and transform practices (Helu, 1999). What the Tongan metaphors highlight are

meanings of leadership associated with nurturing (*'olunga 'aki e kaliloa'*) and collaboration (*fetākinima*, grabbing hold of another's hand). The metaphors highlight that culturally meaningful leadership and mentoring in Tonga are spiritual, nurturing, communal, and collaborative (Johansson Fua & Sanga, 2007). Metaphors also provide various meanings that can be articulated and expressed differently across different contexts, but are essentially grounded in indigenous Pacific language and meaning making.

6. Conclusion

As educators, teaching and learning is not solely transmission of knowledge and skills. Mentoring requires formalised processes that utilise indigenous Pacific practices like *talatalanoa* and observation and doing which are guided by Tongan values such as *tauhi vā, faitotonu, mālie, māfana,* and *maama*. Moreover, the value of Tongan metaphors adds layers of depth to meaning making which will enable the school leader or teacher to think about their leadership practices from various perspectives that are conducive to learning and growth.

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4

Family Structure and the Academic Success of Students in Secondary Schools

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Abstract

This study examines how family structure affects the academic success of secondary school students in Tonga. The study found that four key predictors associated with the family are directly linked to academic success: parental involvement, family structure, family expectations, and Christian faith. While nine predictors were tested during the study and six identified as statistically significant, the four key predictors mentioned above are categorised as aspects of "family structure". Altogether, 240 participants were selected using *Simple Random Selection*. Students' performance scores were assessed by *Multiple Linear Regression* and an ensemble of different model selections. The findings indicate that family structure has a significant effect ($r = -0.25$) on academic success. In addition, on average, students raised by the family structure categorised in this study as *Family Structure A* (FSA) performed better academically than their counterparts raised by families categorised here as *Family Structure B* (FSB) (39%, $p = 0.0006$). Overall, the study found that despite the type of family structure, parental involvement is the most significant predictor of academic success.

Keywords: Family structure, academic success, parental involvement, secondary schools, Tonga, *'ofa*

1. Introduction

*Ko 'api 'a e 'uluaki 'apiako*ʻ. The home is often termed the first school and parents the first teachers who interact with the child. The home is where children learn values, behaviours, language, and priorities by observing how their parents act and react every day. At home, the family is the fundamental and most vital factor in the development, behaviour, and well-being of a child (Da Figueiredo, Rodrigues Sequeira, & Valadão Dias, 2012). When children are in school they will continue to behave based on what they have learnt from home.

As the first teachers, parents have the responsibilities of a builder laying a solid and sure foundation for the life of a child. A building with a sure foundation is one built on solid rock. When the foundation is strong, it can carry the weight of anything that it is designed to hold. For the young generations to weather the storms of life, to be successful in all facets of life and to survive all adversities, the keystone of their lives must be built on solid rock. Therefore, the development of a child into a mature and stable citizen of a society starts at home.

Ko e hakau 'o e 'aho' ni, ko e fonua ia 'o e kaha'u' (The reef of today will be the island of tomorrow). In other words, the children of today will be the nation of tomorrow. As such, to have a future

prosperous and a stable society, our reef (our children) must be well looked after. They must be prepared and trained to have true wisdom in order to cope with the adversities in life.

Poto (wisdom) to Tongans is not just academic success alone. *Poto fakapotopoto* means to know and fulfil all your responsibilities to the family, church, and community as a whole; to know your position (rank); know how to use the language; know your culture and Christian values. *fefaka'apa'apa'aki* (respect), *tauhi vā* (loyalty), *lototō* (humility) and *mamahi'i me'a* (commitment) are the main cornerstones known as *Faa'i Kavei Koula* (Four Golden Pillars) of the family structure in Tonga. All these core values are found in '*ofa* (love), thus *'ofa* is the foundation stone of the *Faa'i Kavei Koula.* As described in a blog outlining the hymn (The history of love at home, 2014), John Hugh McNaughton articulates – *Love becomes a way of life; sweet, insistent end of strife; glad submission each one's gift; willing pledge to love and lift; healing balm for every rift, when there's LOVE at home*.

2. Background & Context

Since 2015, the academic success of secondary school students in Tonga has been an increasing political issue. Changes were made to the education system because it was believed that secondary school students' poor academic success was due to using standardisation of marks. For example, measuring students' achievement using raw marks and standardisation of students' test scores was abandoned. Instead, this method was replaced with the *Structure of the Observed Learning Outcomes* (SOLO) taxonomy. Additionally, parents blamed teachers for the poor academic success of their children. However, in reality, various factors have contributed to poor academic success.

Systematic research was deemed necessary to help educationalists understand and identify potential reasons for poor academic success. Evidence-based research was necessary to help guide and plan effective learning environments. Globally, family structure has been identified as one of the major factors impacting on academic success. According to Coleman's (1966) report, a child's family circumstances have a far greater impact on that child's academic achievement than the quality of the child's school.

The purpose of my study was to increase understanding of the association between family structure and the academic success of secondary school students aged 13 to 18 years in Tonga. Family structure is classified in this study in two categories: *Family Structure A* (FSA) and *Family Structure B* (FSB). FSA is defined as comprising two biological parents (or adoptive parents from birth), one male and one female. In contrast, FSB is a single parent family (including by birth (a solo-mother), divorce or death), or the student has no parent present (for example they are staying with relatives or friends). In order to plan and implement effective practices for students' academic success, it is important to identify both the problem and the predictor variables as per the saying; "You can't apply the medicine until you know where the wound is" (Tyndale, 2013). Once this is known, it may then be possible for the optimal use of time and resources to design the best intervention strategies (Fonteboa, 2012).

This study has provided valuable information, and it is timely and relevant. The findings have positive implications for schools administrators, *Faiako Ma'a Tonga (*Tonga teacher vision and

philosophy – the ideal Tongan teacher), parents, and students. It can be used by administrators to outline and design effective instructional and support strategies aimed at assisting students to achieve academic success. *Faiako Ma'a Tonga* could use the results to take specific and focused actions to minimise academic success gaps. Furthermore, the findings of the study may also help parents decide on best actions and practices to help motivate their children to work effectively, perform, and achieve to the best of their capability.

New knowledge and an understanding of the significant relationship between the family structure and academic success has the potential to lead to a change in attitude. My own personal hope is that there will not be any unnecessary nor unjustified blame placed on the students, their families, the community, and the educational sector. Rather everyone involved in the learning communities will realise their own vital role in the children's academic outcome. The results have the potential to inform the Government of the Kingdom of Tonga so they can respond appropriately channelling support to where there is the greatest need.

3. Literature Review

A large number of empirical studies have demonstrated that family structure is one of the key variables associated with children's academic success (Astone and McLanahan, 1991; Hampden-Thomson, 2009; Kraydal, 2009; Bolu-Steve and Sanni, 2013). The majority of these studies have been conducted in the United States and may not be generalised to Tonga. Studies have found academic success gaps exist between children growing up in what I have defined as FSA and FSB families (Del Angel-Castillo & Torres-Herrera, 2008; Hampden-Thomson, 2009; Yara & Tunde-Yara, 2010). In a comparable analysis of 11 countries, nine reported academic success gaps, the exceptions being Australia and Iceland who consistently demonstrated insignificant achievement gaps (Pong et al., 2003).

Over fifty years ago, Coleman (1966) found that the family's role in their children's learning and academic success may have more influence than the schools with the highest academic standards or the most wealth. Since then, this idea has been explored by many scholars. For example, Astone & McLanahan (1991) attributed these differences in academic success to the positive influence of parental involvement in children's school achievement. They described a situation where an adolescent grew up in a single-parent or in a blended-family and received less encouragement and had less help with schoolwork than the adolescent with both biological parents. The authors concluded that differences in parental behaviour accounted for the academic success gap between children from single-parent/blended families and those from natural parents.

In Nigeria, a number of authors reported similar achievement differences (Bolu-Steve and Sanni, 2013; Olaitan, 2017; Yara and Tunde-Yara, 2010). In Kenya, Nato (2016) found that the FSA had a positive significant impact on academic success compared with a single parent family background. He emphasised that the positive impact of the FSA family was due to economic support, family support, parental motivation, and a conducive home study environment.

In Europe, Steel, Sigle-Rushton & Kraydal (2009) conducted a study examining the relationship between family disturbance and children's academic achievement in Norway. Surprisingly, even in a country with very high economic equality, significant gaps in academic achievement existed

between children who lived with biological parents and those with one parent. A similar finding was reported by Hatos & Sergiu (2013) who highlighted the relationship between parents and children, and their effect on a child's learning outcomes in Romania. The results suggested that the FSB family structure negatively influenced academic success with respect to: quality and quantity of parental involvement; structural deficiencies; adjustment problems; and the decline in material resources. These outcomes were attributed mainly to the disruption of family structures in terms of the absence of biological parents.

In Japan, Nonoyama-Tarumi (2017) reported similar findings about the differences in academic success. Interestingly, in single-mother families more than 50% of low academic attainment was explained by insufficient economic resources, whereas in single-father families, a disadvantage in academic outcome was explained by very low parental involvement. For example, discussion at home, supervision at home, involvement at school – rather than lack of economic resources. The author implied that the apparent differences in achievement in Japan could be the consequences of a gendered labour force and the division of labour among spouses in the Japanese society.

In retrospect, my study examined the relationship between the types of family structures in Tonga and the academic success of Tongan secondary students aged 13 to 18 years old. The inclusion of parental involvement and *Socio-Economic Status* (SES) as predictors were informed by a review of the above literature exploring the relationship between families and academic success. I also reviewed several other factors including, family expectations; Christian faith, time spent at home to study, and selected demographics (school, age, and gender).

4. Methodology

The primary purpose of my study was to examine the relationship between the types of family structures and the academic success of students in secondary schools in Tonga. Additionally, this study is interesting in identifying the key predictors of student academic success and the most important predictors associated with the family.

4.1 Participants

The target population was secondary school students aged 13 to 18 in Tongatapu. For the sample to produce representative outcomes, it must be large enough to produce reliable and valid estimators for the population. Therefore, this study involved 240 participants.

4.2 Sampling Method

Cluster sampling was employed to select the schools from nine education providers (see Figure 1) operating in Tonga: six education providers were selected; one school was randomly chosen from each provider.

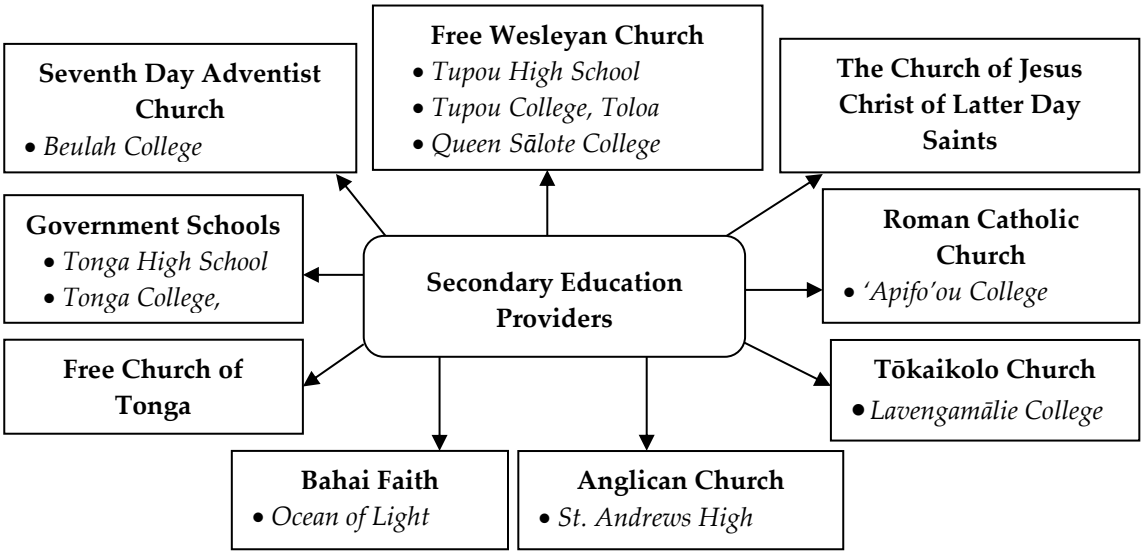


Figure 1: Education Providers and the 13 secondary schools

The *Two-Stage Stratification* (family structure and age) and *Simple Random Selection* were used to select participants from each school (see Figure 2 below).

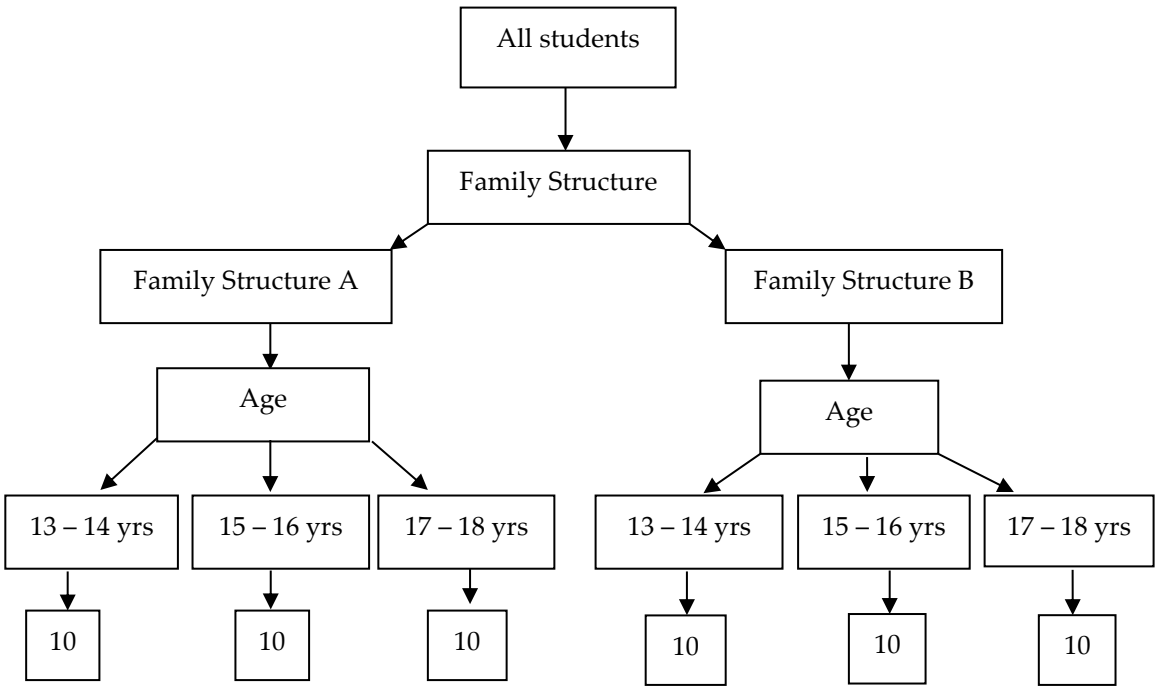


Figure 2: Flow chart for selecting of participants from each school

4.3 Data Collection

Both quantitative and qualitative data were collected through interviews and from administrative data. Each student was interviewed for at most 10 minutes; interviews were audio-recorded with the consent of the participants and their parent(s).

4.4 Statistical Analysis

Descriptive statistics were used to examine all variables (see Figure 3 below) whereby *Box* and *Density Plots* visualised the differences in the means of the academic performance scores from different levels of all the independent variables.

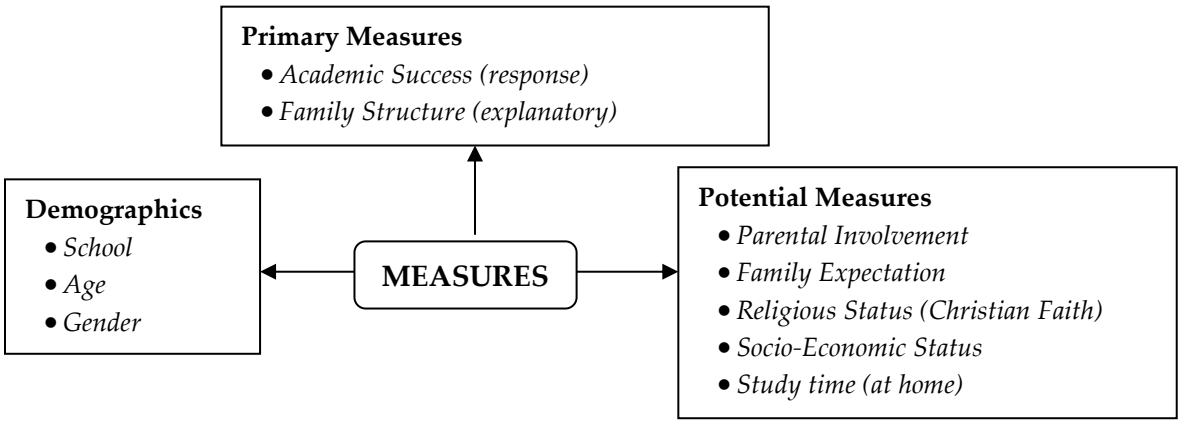


Figure 3: Different Measures

The *Linear, Logistic,* and *Ordinal Logistic Regressions* were used to explore the relationship between academic success with family structure and other predictors. The *Multiple Linear Regression* was the main model of analysis, with *Logistic* and *Ordinal Logistic Regressions* used to confirm the outcomes of the *Linear Model*. The main model is between academic success and family structure; however, other predictors were added as a control to determine if the relationship remained the same.

The *Univariate Models* were first produced to look at individual predictor variables. The final *Multivariate Model* was selected using different methods in the *R* software like, *Backward Elimination, Akaike Information Criterion, Boruta, Mallow's CP Selection, randomForest, Relative importance,* and *Information values*. All these methods were used to identify the most consistent significant variables by comparing their outcomes.

All the analyses was conducted using *R Version 3.2.3* with a significant level of 5%.

4.5 Ethics

Clearance for this study was approved by the *Educational Research Human Ethics Committee* of the University of Canterbury, New Zealand. The Chief Executive Officer for the Ministry of Education and Training in Tonga granted the permission of this study to be conducted in Tonga.

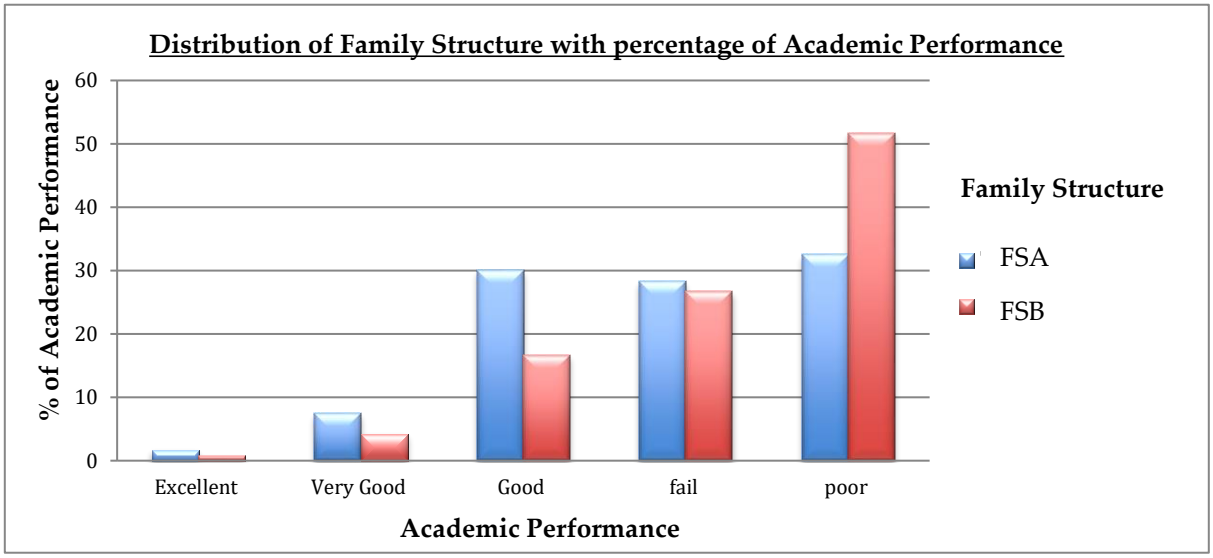
5. Results & Findings

Out of the 13 secondary schools in Tongatapu, six were selected for the study and 360 students participated during the data collection process. However, during transcribing and coding processes, two schools were excluded from the dataset and the study ended up with a sample of 240 participants.

5.1 Descriptive Data

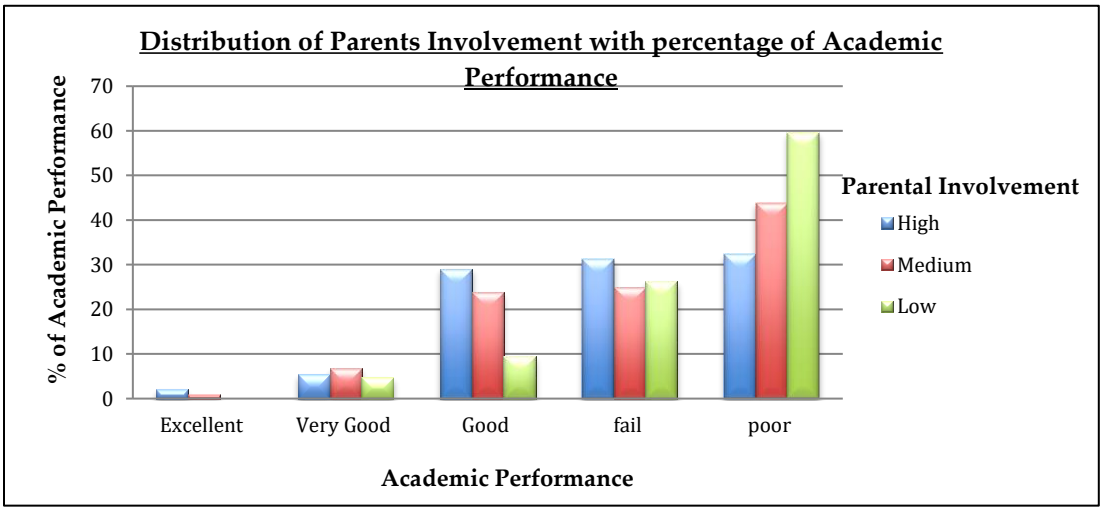
Graph 1.1 shows that the highest number of poor performers (61.4%) were students from FSB families with 38.6% coming from FSA families.

Graph 1.1 Family Structure with Percentage of Academic Success



Nearly half the students were in the group with medium parental involvement (43.8%) and only 17.5% were in the group of low parental involvement. Graph 1.2 indicates that when parental involvement was low, over half the students (59.5%) had poor achievement. In comparison, with very high parental involvement 36.5% of the students had good or higher achievement.

Graph 1.2 Distribution of Parental Involvement with % of Academic Success



The overall mean for academic achievement is 44.5 with a standard deviation of 15.6. Figure 1.1 shows that students from FSA (traditional) families had a higher mean than those from FSB (non-traditional) families.

Figure 1.1 Academic Success by Family Structure

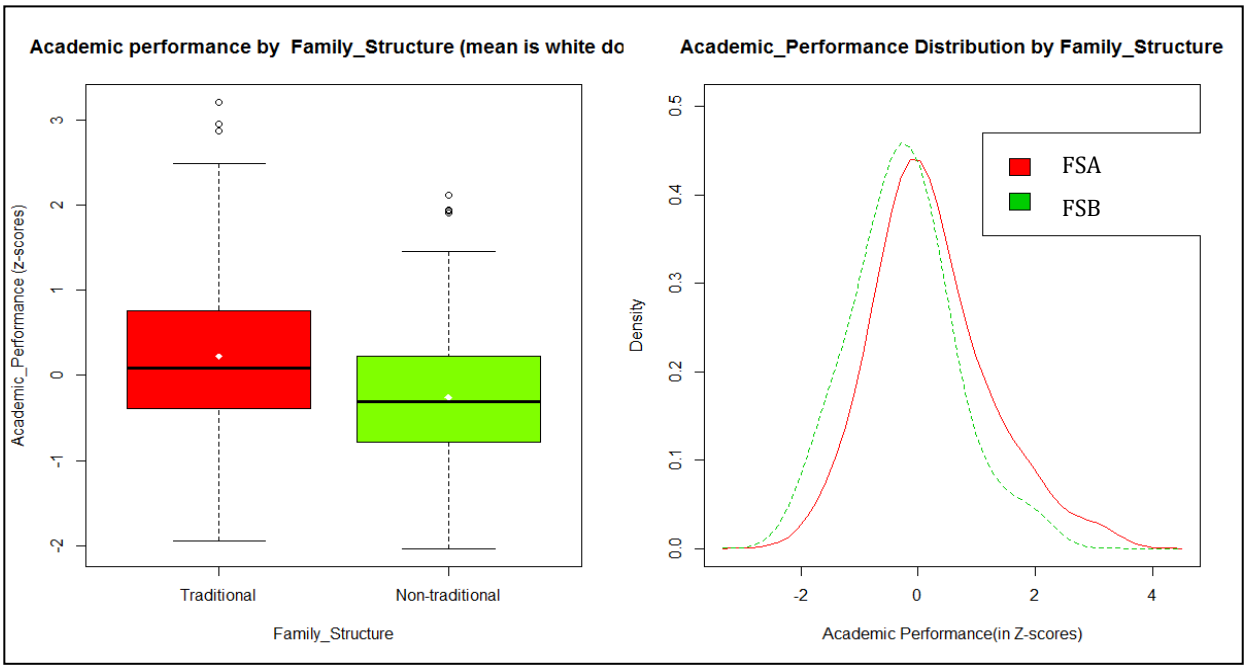
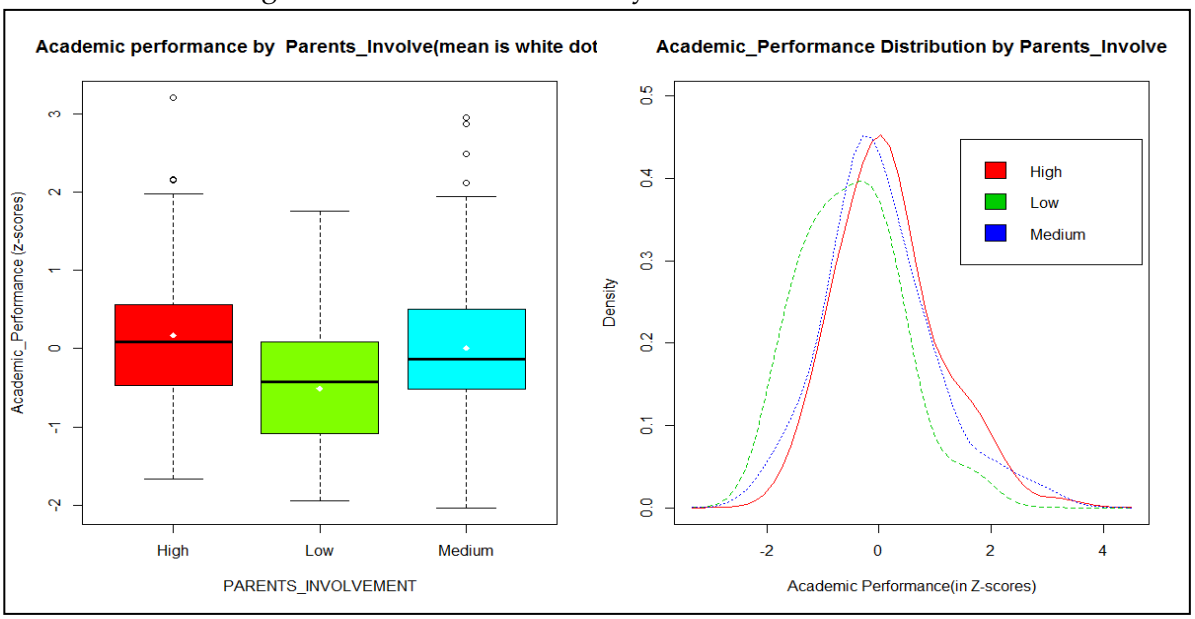


Figure1.2 shows that there was little difference between the distribution of academic success among students from medium and high parental involvement groups. The low parental involvement group was overall lower, and more varied. The overall average academic success of the three groups of parental involvement were different with the highest mean in the high level.

Figure 1.2 Academic Success by Parental Involvement



5.2 Statistical Analysis

An inspection of the data indicated that family structure is correlated to academic success. Additionally, outliers were identified and the three most influential were removed from the dataset leaving 237 participants for the final analysis.

Table 1.1 summarises the outcome of individual univariate linear regressions between academic success and each explanatory variable. *School, family structure, parental involvement, and family expectation* independently have significant direct effects on academic success.

Table 1.1 Summary of Simple Linear Regression outcomes of each predictor

Independent Variables	F-statistics,	p-value,	degrees of freedom	R-Squared
School	11.14	7.35e-07	3 and 233	12.6%
Age	1.68	0.189	2 and 234	1.4%
Gender	1.61	0.205	1 and 235	0.7%
Family Structure	15.55	0.0001	1 and 235	6.2%
Parental Involvement	7.54	0.0007	2 and 234	6.1%
Family Expectation	3.92	0.021	2 and 234	3.2%
Religious Status	1.92	0.150	2 and 234	1.6%
Socio-Economic Status (SES)	1.92	0.149	2 and 234	1.6%
Study Time at Home (hr per day)	0.29	0.751	2 and 234	0.2%

Tabulated F-Statistics with alpha = 0.05; df1 and df235 = 3.88; df2 and df234=3.034; df3 and df233 = 2.64

Table 1.2 shows predictors that were significant for predicting academic success in the three different regressions (*Linear, Logistic,* and *Ordinal Logistic*). They have similar outcomes except for family expectation (*linear*) and religious status (*ordinal*)

Table 1.2: Significant Predictors for each Regression Model

Linear	Logistic	Ordinal logistic
School	School	School
Family structure	Family structure	Family structure
Parental involvement	Parental involvement	Parental involvement
Family expectation		Religious Status

5.2.1 Reduced Multivariate Model

The focus of this modelling is to produce a *Parsimonious Model* with good explanatory predictive power, which can explain academic success with a minimum number of independent variables. Backward elimination was used for selection of the best model by deleting the insignificant predictors one-by-one starting from the one with the highest p-value greater than 0.05. *School, parental involvement, family structure, age, family expectations,* and *religious status* are the significant predictors of academic achievement. Table 1.3 summarises the outcomes of other selection methods used for confirmation. There are differences in the order of importance in all methods; however, school, parental involvement, and family structure are the most influential predictors of academic success whereas SES, gender, and study time at home are the least important.

Table 1.3 Predictors in Order of the Strength of Importance for the Prediction of Academic Success

Order of importance	Boruta	Relative Importance	Random Forest	Information Value
Strong	School	School	School	School
.	Family structure	Family structure	Parental	Parental
.	Age	Parental	involvement	Involvement
.	Parental	Involvement	Family structure	Family Structure
.	Involvement	Family	Religious Status	Religious Status
.	Family	Expectation	Age	Family
.	Expectation	Age	Family	Expectation
.	Religious Status	Religious Status	Expectation	Gender
.	SES	SES	Gender & Time	Study Time
.	Gender	Gender	SES	Age
Weak	Time	Time		SES

Based on all the above methods, school, parental involvement, age, family expectations, and religious status were selected as predictors to control the model between academic success and family structure.

As shown in Table 1.4 below, adding the other significant predictors to the model, the impact of family structure on the students' academic success is still significant. *Linear Regression* was the main analysis model and the *Logistic* and *Ordinal Logistic Regressions* were used as confirmation of the results from the *Linear Model*.

Table 1.4 Outcome of the Final Model from each Regression Model (*Linear, Logistic, Ordinal Logistic*)

Potential Predictors	***Linear Regression*** **Co-eff, (Con.Int), p-value**	***Logistic Regression*** **Co-eff, (Con.Int), p-value**	***Ordinal Logistic Regression*** **Co-eff, (Con.Int), p-value**
School			
Sch_1	**Reference**		
Sch_2	0.42, (0.11, 0.74), 0.008*	1.17, (0.32, 2.05), 0.008*	-0.76, (-1.50, -0.03), 0.040*
Sch_3	-0.50, (-0.82, -0.19), 0.002*	-0.97, (-2.01, -0.01), 0.054	1.31, (0.57, 2.05), 0.0005*
Sch_4	0.02, (-0.29, 0.33), 0.896	0.15, (-0.73 , 1.03), 0.741	0.13, (-0.57, 0.82), 0.724
Parental Involvement			
High	**Reference**		
Medium	-0.16, (-0.40, 0.09), 0.219	-0.57, (-1.26, 0.09), 0.093	0.42, (-0.13, 0.98), 0.138
Low	-0.49, (-0.79, - 0.13), 0.006*	-1.29, (-2.51, -0.22), 0.025*	0.98, (0.19, 1.77), 0.015*
Family Structure			
Traditional [FSA]	**Reference**		
Non-Traditional [FSB]	-0.39, (-0.61, -0.17), 0.0006*	-0.81, (-1.46, -0.17), 0.014*	0.80, (0.28, 1.32), 0.002*
Age Band (2 years)			

13 – 14 years	**Reference**		
15 – 16 years	-0.02,(-0.28, 0.25), 0.897	-0.32, (-1.09, 0.42), 0.394	0.37, (-0.32, 0.88), 0.233
17 – 18 years	-0.32, (-0.58, -0.05), 0.020*	-0.70, (-1.49, 0.07), 0.077	0.72, (0.09, 1.33), 0.023*
Religious Status			
Rank1	**Reference**		
Rank2	-0.07, (-0.34, 0.20), 0.616	-0.41, (-1.21, 0.36), 0.304	0.11, (-0.50, 0.72), 0.722
Rank3+	-0.30, (-0.59, -0.02), 0.037*	-0.72, (-1.62, 0.10), 0.096	0.64, (0.02, 1.30), 0.058
Family Expectation			
High	**Reference**		
Medium	-0.26, (-0.50, -0.02), 0.019*	-0.33, (-1.18, 0.20), 0.166	0.35, (-0.53, 0.69), 0.083
Low	-0.55, (-1.01, -0.09), 0.036* *Adjusted R-Square = 23.4%*	-0.78, (-2.40, 0.49), 0.226	1.03, (0.06, 1.39), 0.227

* p-value < 0.05; Significant level for all analysis is 0.05; Co-eff – Coefficient; Con.Int – Confidence Interval

According to the outcome shown in Table 1.4, it is significant that, on average, students from FSA families perform better than their counterparts from the FSB families holding the other predictors constant.

6. Discussion

My study demonstrates that, on average, students raised in FSA families have better academic success than those from FSB families. Additionally, among the substantial indicators of academic success associated with family structure are parental involvement, family expectations, and Christian faith, with parental involvement as the most significant predictor.
Conversely, the findings show that a low rate of parental involvement in a child's schooling is directly associated with low academic success. Most of the students with low parental involvement are those from the FSB families. This gives an indication that students raised in FSB families where there is a single parent or no parents at all have much lower parental involvement while students with parents who are highly involved in their schooling have higher academic success. According to Menaghan (1996), involving parents in school-related activities is one of the important factors affecting children's academic success. She reports that across all types of family structures, a higher level of parental involvement is significantly related to a child's successful academic success.

Parental involvement appears to be correlated to family structures; therefore, family structures have both direct and indirect statistically significant effects on students' academic success. This highlights that disruptions in family structure should not be taken lightly because they can cause much damage, especially in children's lives including their academic lives.

Sufficient and effective parental involvement is a clear, visible demonstration of *'ofa*. *'Ofa* is powerful and can give hope to any child from any particular family structure to be successful in all aspects of life including education. Without *'ofa*, the child may feel lost, unimportant (unvalued) and hopeless, and, as a result, may ultimately give up on everything including their academic lives. *God is Love. Without God we can do nothing* (John 15: 5). As King Solomon said, "*Unless the Lord builds a house, the work of the builders is wasted. Unless the Lord protects a city, guarding it with sentries will do no good*" (Psalm 127:1). *'Ofa* is the building block to foster eagerness in the

hearts of our children and the seeds of *'ofa* may take root in the soil of adversity. Our children may not escape adversity such as disruptions in the structure of the families, but it is possible to equip them with the courage, enthusiasm, and strength to face it and still be successful.

7. Conclusion

Like earlier studies on this topic, this particular study shows that family structure has statistical significance in terms of secondary school students' academic success in Tonga. Parental involvement is interrelated with family structure. That is, the relationship between family structure and academic success is mostly determined by parental involvement. Therefore, I can conclude that despite the types of family structures, parental involvement significantly determines a child's academic success. This suggests that by working together with parents, educators can better discern and develop the individual capabilities of each child/student. Therefore, consistent interaction and communication between parents and teachers is strongly recommended.

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First of all, I would like to thank and acknowledge the Almighty God for the assistance of the Holy Spirit by giving me the faith, strength, and courage not to give up even though there were times I was about to throw in the towel. With a very grateful heart, I thank Him for the wisdom that enabled me to fulfil this task.

I would like to acknowledge the Dean of TIOE, Ms. Liuaki Fusitu'a, Dr. Dave Fa'avae, and my mentor Dr Sonia Fonua who contributed to my understanding and, most significantly, my confidence. Thank you so much for all the encouragement and for not giving up on me. May the Good Lord bless you all with more wisdom.

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5

Fakalekesi ʻo e Tongaʼ: A Tongan Conceptual Framework for Improving Educational Access

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Abstract

ʻOku fonua pē ʻa tangata (The land is the people; the people are the land)

Vaioleti (2011) defines *fonua* as country and that a country is its people, which means, people are the strength of a nation. This definition clarifies the long-term issue of exclusion in two main high schools in Tongatapu representing education systems in Tonga – government and non-government schools. The continuous increase in over-aged repeaters and excluded students provides ground for this paper to share with principals and teachers a Traditional Educational Knowledge (TEK) method known as the *Fakalekesi ʻo e Tonga Framework* (Vakapuna, 2019). This classroom method provides principals and teachers with a contextualised approach to teaching rather than applying introduced Western ideas in dealing with Tongan students at school. To build sustainable education in Tonga, teachers are recommended in this paper to revisit TEK strategies and to deal with Tongan students in our traditional ways of teaching and learning. The purpose of the *Fakalekesi ʻo e Tonga Framework* is to provide endurable learning for Tongan students to learn in their home and (Johansson-Fua, 2008).

Key points

- *The development of mutual relationships (tauhi vā) between principals, teachers and students is important to improve educational access and to promote academic achievement in Tonga;*
- *The practice of Fakalekesi ʻo e Tongaʼ and Traditional Educational Knowledge (TEK) are central to teaching Tongan students in Tongan classrooms;*
- *School principals are key figures to ensure the effective development and improvement of teacher and student workmanship, participation and commitment.*

1. Introduction

Ko e hakau ʻo e ʻahoʼ ni ko e fonua ʻo e kahaʻu (The reef of today is the land of tomorrow)

I am a teacher at the Tonga Institute of Education (TIOE) and my key teacher educator role is to nurture, shape, and equip teacher trainees with the attributes of a *Faiako Maʻa Tonga* (ideal teacher for Tonga). I was born in *Tafahi*, a remote island in Niuatoputapu to the far north of Tonga. I was later raised on the main island, Tongatapu during my high school years. I went to Tonga High School in the 1990s, and after completing my Diploma in Education from the TIOE, I returned to teach at the Niuafoʻou District High School as a novice teacher. I later continued teaching at my home island, Niuatoputapu. It was then I started to realise that the majority of students there finished schooling in the lower secondary school levels or when in Form 5, which is the highest

level of high school education in the Niua's. I moved back to Tongatapu and taught at the government's all boys' school, Tonga College, and was surprised to find a similar occurrence. I started to think of an alternative pathway for these students and therefore, decided to conduct my master's thesis study to investigate educational access in the lower secondary school levels and explore the status of access focusing on exclusion and the transition from one level to another.

I start my story as a *hakau* (reef) which gradually transforms as I grew older into a *fonua* (island/land) – that is who I am today and my destination in which I believe is a calling from above to become a teacher, a *Faiako Ma'a Tonga.*

There are two purposes for writing this paper. Firstly, I aim to share the TEK method of teaching and learning, known as the *Fakalekesi 'o e Tonga Framework,* which I obtained from my master's thesis study (Vakapuna, 2019). Secondly, I want to share my experiences as a teacher at the TIOE to support teachers in their teaching in Tongan classrooms in order to improve educational access and to promote the academic achievements of students. This paper starts with providing background context on the significance of the TEK method of teaching to improve educational access and to promote the academic achievements of students in Tongan classroom contexts. This is followed by a literature review on the TEK in the Pacific, the methodological procedures used in the study, and then the findings highlighting the usefulness of the *Fakalekesi 'o e Tonga Framework* for teachers and how to effectively engage their students in the classroom. The paper concludes with the importance for principals to establish and maintain good relationships (*tauhi vā*) with their teachers and students to promote effective workmanship, participation, and commitment.

2. Background

During my eight years work experience at Tonga College, I became concerned about the issue of access in terms of over-aged repeater students and student exclusion. I embarked on a master's thesis to better understand this issue not only at Tonga College but in all school-aged students who wander around Nuku'alofa, remain in their villages, and sell goods during school hours. The complicated issue of access is claimed by the Ministry of Education and Training (MET) to be a frequent problem with lack of participation (enrollment) reaching 4% at the primary school level and almost 20% in the secondary school levels (Annual Report, 2013).

The enrolments at Tonga College steadily declined (Vakapuna, 2019). In fact, both the beginning and end of the year enrolments declined during the period of this study. For example, 19% in 2012, 11% in 2013, 22% in 2014, and 14% in 2015 were excluded from Tonga College towards the end of the year (Vakapuna, 2019). These statistics proved that the MET Annual Report (2013) was accurate. The MET and other education system authorities raised the increasing issue of repetition and exclusion in the last decade, but there seemed to have been no thoughtful response from any education system (government and non-government). The lack of attention to this issue has resulted in a growing number of over-aged repeaters from lower secondary schools.

3. Literature Review

Maka Fetōli'aki (Chipping a rock with another rock)

Maka fetōli'aki is a TEK method for a large number of people working together cooperatively. It originated from a period in Tongan history where stones were used to make tools. In order to chip a big stone to make a gravestone, many people were needed to work together towards that goal. A familiar Tongan proverb states that only the rock chipped from the big stone is hard enough to chip another rock from the big stone. I used *maka fetōli'aki* to collect and analyse existing literature for this study and later to contribute to the global discourse of educational access in lower secondary school levels. My work, Vakapuna (2019) and Lewin (2007) alongside many others are chipped together to provide a better understanding of educational access in Tonga.

3.1 Educational Access in Lower Secondary School Levels

Lewin (2007) in his study in South Africa highlighted that access is very problematic in developing countries. His model[3] explained the decline of enrolments from compulsory education to its peak in the lower secondary school levels. Tonga made an attempt to promote access by extending the compulsory age for basic education to 4 to 18 years (MET, 2012 & 2013b). However, this thoughtful attempt was affected by two factors associated with the governance of the education system; i) ongoing changes to the position of CEO[4] (Carpenter et. al, 2016; 'Otunuku et. al, 2017); and ii) the attitude of MET department leaders (TIOE, 2020). These two factors shifted the priority of the MET from improving equitable access and quality education as highlighted in the Education Act, Part II – No. 5.a (MET, 2013b) to a system where exclusion from basic education rapidly increased (MET, 2013a).

Tongan scholars such as Thaman (1988) highlighted that teachers need guidance and direction to practice more appropriate ways of teaching in a Tongan classroom. Johansson-Fua (2008), based on the suggestion from Thaman (1988), developed the *Faiako Ma'a Tonga* philosophy within the *Langa Faleako Framework* as an attempt to help with the issue by assuring that only Tongan teachers with the attributes of a *Faiako Ma'a Tonga* are befitting to teach in a Tongan classroom. These attributes derive from the four posts (*pou*) of the *Langa Faleako Framework*: (*Pou ko Poto (able to do); Pou ko 'Ilo (knowing); Pou ko Lea faka-Tonga (Tongan language); and Pou ko Fakafeangai 'a e Faiako (Teacher Professionalism)*. These posts represent core qualities that are required to guide teacher and performance standards. The MET (2012) responded by trying to officially register every teacher in Tonga with the hope of promoting quality professional teachers. However, these attempts were lightly taken by the MET disregarding the issue of access. Carpenter et al (2016) and 'Otunuku et al (2017) claim that MET leaders shifted their focus to political issues such as alternating CEO personnel and terms rather than implementing the core needs of the 2013 Education Act.

Tatafu (1997) initially conducted a study on high school dropouts in Form 1 to Form 5 and informed the education systems about factors that affected schooling in lower secondary school levels in Tonga which lead to the unsuccessful completion of the Form 5 level. There were no

[3] CREATE Conceptual Model of Zones of Exclusion (Lewin, 2007)

[4] Chief Executive Officer

follow up studies on the issue suggesting that the study from Tatafu (1997) was not considered a priority or focus aspect by the MET. However, the MET recorded similar problems from both government and non-government schools within its Annual Report (2013a). Unfortunately, no action was taken. The MET (2012) followed up on the issue of access and reattempted to explore the issue of exclusion. Hence, the *Faiako Ma'a Tonga* vision and philosophy of teaching and education was birthed (Johansson-Fua, 2008; MET, 2012, 2013a). The initiative is effective although the issue of access in terms of exclusion is still a lingering concern.

3.2 My Master's Study

My master's thesis study explored the level and status of student access and participation in the lower secondary school levels, a prolonged educational concern in Tonga. The Tongan research methods/tools of *talanoa*, *fono*, and *nofo* were employed to collect appropriate information from participants. Vaioleti (2006; 2011) and Johansson-Fua (2009) argue that *talanoa* is an effective way of collecting valuable information from the local people of Tonga. Johansson-Fua (2008; 2009) extended the importance of *talanoa* to cooperate with *fono* and *nofo* to make *talanoa* more meaningful in terms of deep semi-structured dialogues with locals as well as participant observation. I used *fono* as a form of *talanoa* or *tālanga* (constructive *talanoa*). The participants did not waste time engaging in impractical *talanoa* but offered rich responses that were directly related to the issue of access. The participants felt free to share their opinions on the issue given because I established acquaintance (*maheni*) and relations (*vā*) with them. *Tālave* helped ease and release any pressure on participants towards the study and researcher. I also used *tālave* to fill the gaps from the *talanoa* and *fono* to validate the reliability of the collected data and to ensure triangulation.

These Tongan research methods/tools are embedded in *fofola e fala' kae talanoa e kāinga'* (roll out the mat for the kin to talk). Lino (2015) expressed in her study that a lot of the problems Tongans face are caused by a lack of communication. Therefore, this paper approached the issue of access through *fofola e fala' kae talanoa e kāinga'* using *talanoa*, *fono*, and *nofo*. Further to that, my master's thesis discovered additional literature to the *fofola e fala* narrative by identifying the specific name of the *fala* (mat) as *fala tā uho* (the mat on which the navel of all *kāinga* members were cut and removed after birth (Vakapuna, 2019). Traditionally, *fala tā uho* was only used for two purposes; i) for a mother to lie on in the delivery room; and ii) for community meeting (*kāinga*). This paper presented *fala tā uho* as a method of purifying connections and relationships between principals, teachers, and students.

4. Methodology

Fofola e fala tā uho'[5] *kae talanoa mālie e kāinga'* (Roll out the family birth mat for kin to effectively deliberate)

By following an exploratory sequential design, four qualitative tools were engaged in the study and then followed up with a quantitative questionnaire survey. An initial *talanoa* with the two principals was established to present my study and to request permission to conduct document

[5] A special mat woven for two purposes: 1) for the delivery room for the birth of a new child, and 2) to roll out for the kin to talk.

analysis, *talanoa*, *fono*, *nofo*, and a questionnaire survey with selected teachers and students. Informed consent forms were obtained from the administrators, teachers, students, and schools to participate and to allow access to their attendance records and academic reports (mid-year and final). Document analysis was used to obtain baseline data followed by a *talanoa* with the principal, a *fono* with teachers, and then another *talanoa* with the principal to wrap up the qualitative data collection. The qualitative data was analyzed and interpreted to form a table of qualitative results. This determined the variables for the quantitative survey questionnaire. The data was analyzed and later validated through member checking. This is associated with the epistemological approach of *fofola e fala' kae talanoa e kāinga'*. The researcher returns to the participants and rolls out the *fala* (result) for the kin to discuss. The results from the *fofola e fala' kae talanoa e kāinga'* were *fakafiemālie* (very satisfactory), *fakafiefia* (delightful) on the part of both the researcher and the participating schools. It was also reported as being *tokoni lahi 'aupito* (very helpful) to the participants, especially the school principals.

Two main secondary schools selected in Tongatapu for the study represented the two main education systems in Tonga – government and non-government. Tonga College represented the government school system and 'Apifo'ou College, a Catholic school, represented the non-government school system. After collecting the qualitative data through document analysis, *talanoa*, and *fono*, I started to develop a framework based on the TEK to address the collected data – the *Fakalekesi 'o e Tonga Framework* (see Figure 1). The framework aims to assist both school principals and teachers in their management and teaching practice. Therefore, the nature of the framework is divided into two major approaches: i) management approach for administrators; and ii) teaching approach for teachers. I present this framework as my key finding to help provide some insight to the continuous unpacking of the ideal *Faiako Ma'a Tonga*.

4.1 Key Participants

Tonga College:	Mr. Kalafitoni Lātū (Principal) and 'Ana Veikoso (Deputy Principal)
'Apifo'ou College:	Fr. 'Aisake Vaisima (Principal) and Tu'ukaunga Petelō (Deputy Principal)

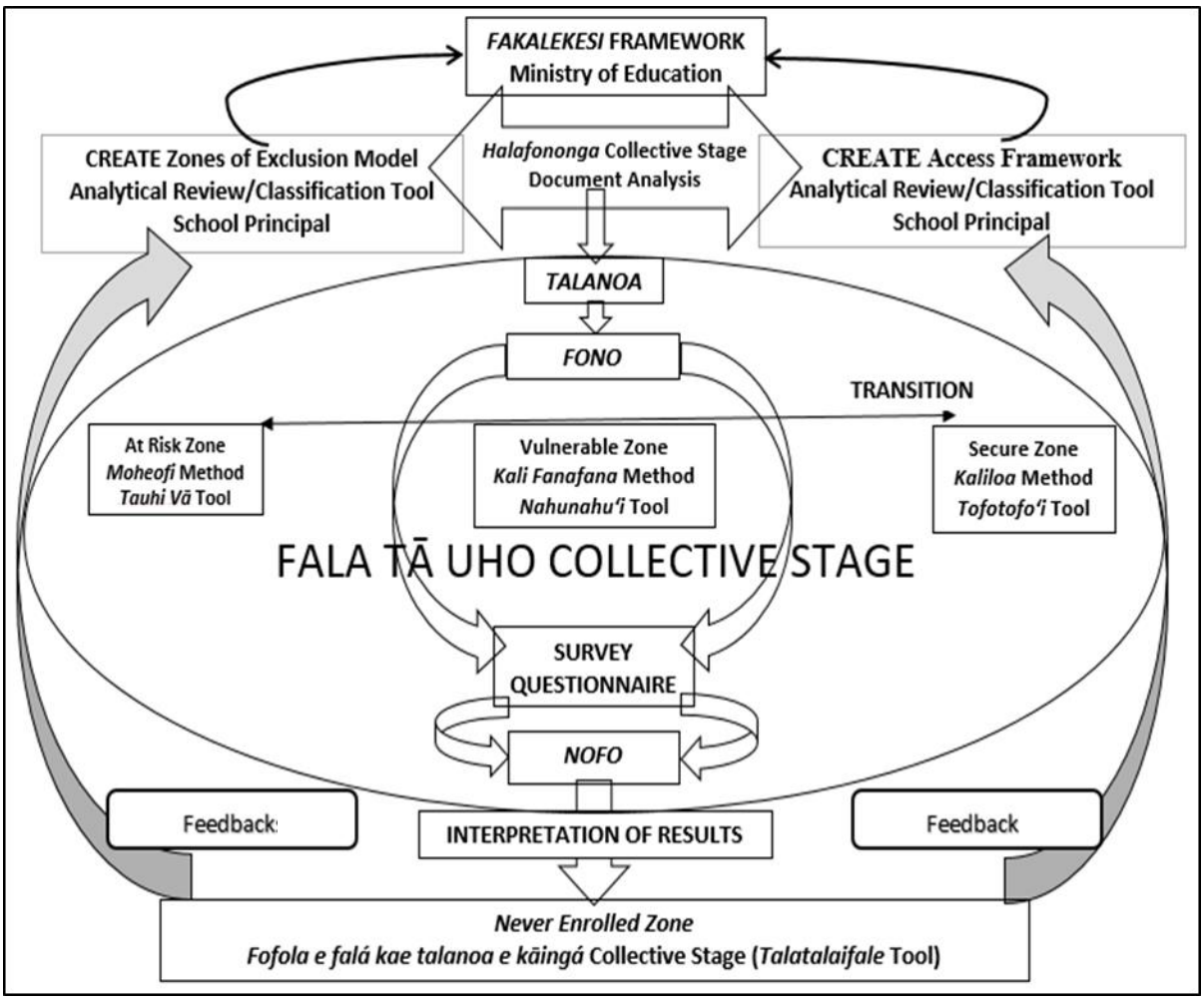

Figure 1: Fakalekesi 'o e Tonga Framework (Adapted from Vakapuna, 2019)

5. Results & Discussions

Talatalaifale ki ha Faiako Ma'a Tonga tu'uloa (Telling good things for a better and sustainable *Faiako Ma'a Tonga*)

Talatala 'i fale is the original phrase made up of three words. *Tala* means telling, *'i* is a locative preposition which combine two root words means inside, and *fale* means house. Today the word *talatalaifale* means telling and reminding of good things for the children inside the living room (*lotofale*). This *talatalaifale* process needs to be carried out to support sustainable livelihoods (Johansson-Fua et. al, 2007) and learning to live (Ministry of Planning and National Planning, 2015). The results and discussions in this paper serve to find and tell good things to administrators, teachers, and especially students. Thus, the philosophy of *talatalaifale* is used here as a guide for the administrator's management strategies and the teacher's teaching strategies.

5.1 Administration Management Strategies

Kato 'i he loto kato (a basket inside a basket) – a method of mapping students

The *kato 'i he loto kato* mapping method is referred to in this paper as the employment of the *Zones of Exclusion Model* and *Conceptualising Factors of Access* (Lewin, 2007). The idea of *kato 'i he loto kato* is evident in the *Fakalekesi 'o e Tonga Framework* as a collective tool known as the *Halafononga* (pathway) collective stage. The study found that both Tonga College and 'Apifo'ou College have no clear form of mapping plan for their students. Therefore, the study initiated *kato 'i he loto kato* as an administrative management strategy to provide and report on students' progress and assessments in both academic and extra-curricular activities. This collective approach re-emphasised the importance of updated and secure filing systems, meticulous and long term school planning and reliable decision making.

5.2 Selection System (Enrolment & Transition)

Document analysis was used to analyse the schools' enrolment records in order to select student participation from the lower secondary school levels, especially students highly affected by both transitional and exclusion issues. Tonga College still practiced the traditional selection system[6] while 'Apifo'ou College has shifted to a new form of free enrolment and automatic promotion through all levels. In this paper, I recommend this new approach by 'Apifo'ou College as a pathway to solving the issue of exclusion at lower secondary school levels. There are two major reasons behind this recommendation: i) to ensure students are cognitively and socially mature before they leave/exit school; and ii) to ensure students complete their legal compulsory schooling age (MET, 2013b).

5.3 Guide for Teachers – Teaching Strategies

Moheofi Teaching Method – Tauhi Vā Tool

Mohe means to sleep or rest and *ofi* means near or close. The culture of sleeping near the mother allows a warm relationship between the mother and her child. That warm relationship makes the child respect (*faka'apa'apa'i*), obey his/her mother's words (*fakaongoongo mo talangofua*), love (*'ofa*), and be well-behaved (*angamalū mo angamā'opo*). The practice of *moheofi* encourages *tauhi vā*, a tool of respect and love. *Tauhi* means to keep and *vā* means relationship. To establish a respective and effective relationship, the mother needs to keep her relationship to her child likewise the child to his/her mother. The *Fakalekesi 'o e Tonga Framework* also applies to children who are in the at-risk zone. These students are categorized as at-risk due to factors such as very low attendance rate, lack of punctuality, poor academic performance, conduct, commitment, effort, attitude, relationship, repetition and being over-aged. The purpose of the *Moheofi Teaching Method* is to help nurture these students who have very limited academic hope and to reposition them on a more positive and productive *halafononga*.

[6] Only students who passed the national Secondary Entrance Examinations and the Tonga College final internal examinations could enroll to the next level.

Kali Fanafana Teaching Method – Nahunahu'i Tool

The *kali* is a traditional wooden pillow or headrest also symbolic of the mother's arm for her child's head to rest on. *Fanafana* means whispering, whereby a mother whispers and imparts good/moral teachings to her child who is resting on her arms. This method of *kali fanafana* is a practiced *nahunahu'i* tool. *Nahu* is the root word which means telling things from a loving heart (*loto 'ofa*) using good words (*lea lelei mo ongo*) with the expectation that her words (*akonaki*) grow in the child's heart (*ongo pea tupu 'i loto*) and ultimately becomes part of the child's life (*mo'ui'aki*). Doubling the word *nahu* to *nahunahu* emphasises the importance of these powerful loving words and the addition of the suffix *'i* gives it movement and proactive-ness. The method can be applied to students who have improving behaviour patterns towards their studies, those who do not fit the secure zone criteria, and those who gradually progress from the at-risk zone to the vulnerable zone. The purpose of this method is to promote and regain student interest in their studies and to secure and maintain that standard.

Kaliloa Teaching Method – Tofotofo'i Tool

The *kali* here pertains to the mother's forehand. The *loa* has various meanings such as a black storm cloud (*fakatamaki 'oku tu'unuku mai*), waiting passionately for something for a long period (*nofo fakatu'amelie ki ha me'a*), and firmness (*tu'u ma'u mo pau*). Therefore, *kaliloa* means to *talanoa* (counsel) by the mother with the aim to create opportunities and shape a better future for her child. This *talanoa* becomes the *tofotofo'i* tool. *Tofo* is the root word meaning positive words that will change a child's heart to perform effectively and efficiently. The mother uses strong and powerful words to urge the child to maintain his/her good life transformation. The doubling of the word *tofo* to *tofotofo* expresses the importance of these powerful words as well as the addition of the suffix *'i*. The method is best used on students who aim for and have reached academic excellence so it becomes an ongoing and permanent attribute.

Fofola e Fala' kae Talanoa e Kāinga' Teaching Method – Talatalaifale Tool

Fofola is a symbol of open-handedness and open-mindedness. The *fala* (mat) refers to the *fala tā uho* mentioned earlier. The intention of *fofola e fala' kae talanoa e kāinga'* is to solve matters beyond the mother's *leke* (room). These matters are treated as *kāinga* issues and require collective efforts. The communication in this forum focuses on the *talatalaifale* tool. The communication in this forum focuses on the *talatalaifale* tool (see page 6). This method is applied to very problematic students as well as their parents who unfortunately, do not fit any of the three zones discussed earlier. The purpose of this method is to inform all members of the school community about the issue. The community can then offer alternative ways and/or solutions to help protect and salvage these students from damaging familial environments.

All the methods discussed above are drawn from the *Fakalekesi 'o e Tonga Framework* (Figure 1) to relate to the current problems of access to schooling. The solution largely rests on school principals (*mā'uli*) and teachers (*fa'ē*) to follow up, track, and monitor their students (*pēpē*) in their learning journey. This study found little to no evidence of any follow-up process as urged by Lewin (2007). The implementation of a system of tracking and monitoring will help to build resilient and strong relationships amongst schools in Tonga, enabling the follow up of all students although they may re-enroll in three to four other schools. The philosophy of the *Fakalekesi 'o e*

Tonga Framework is to bring all the schools together as the only *fala* used to swaddle every newborn Tongan child and learner. The philosophy of this *fala* allows every Tongan child open and unlimited access to any form of formal schooling and education in Tonga (MET, 2013b). I strongly believe that the MET should be tasked with the responsibility to develop a tracing program to ensure that every child in Tonga meets the standard requirement to complete compulsory education.

6. Conclusion

Sio Atu (Looking Forward/Onward)

In this paper, the diversity of the *Fakalekesi 'o e Tonga Framework* is woven together with the motto of the Tonga Institute of Education, *Sio atu* and *Faiako Ma'a Tonga* (Johansson-Fua, 2008) and its key purpose to benefit the learning of the students in Tonga. I have suggested here some administrative methods and teaching methods to assist the *Faiako Ma'a Tonga* in the field. I believe that teaching using Tongan methods would work well in Tongan classrooms, rather than forcing teachers to accept Western ideas. Like Johansson-Fua (2008) suggests, the MET should only allow teachers with the attributes of the *Faiako Ma'a Tonga* to teach in the Tongan classrooms. These attributes are grounded on the four posts of the *Langa Faleako Framework* (Building a House of Learning for Tonga) – a professional development framework for Tongan teachers – i. *Pou ko Lea Faka-Tonga'* (Tongan Language); ii. *Pou ko 'Ilo'* (Knowing); iii. *Pou ko Poto'* (Able to do); and iv. *Pou ko Fakafeangai 'a e Faiako'* (Teacher Professionalism). Also, teachers should demonstrate the four core Tongan values *faka'apa'apa* (respect), *mamahi'i me'a* (commitment), *lototō* (humility), and *tauhi vā* (upholding relationships).

This paper reminds school leaders that it is one of their paramount responsibilities to develop effective school environments, programmes, and management to promote meaningful access to education and learning for all students under their care. The teachers need support to undertake effective and continuous professional development to maintain the attributes of *Faiako Ma'a Tonga* in their teaching/learning processes. Main education stakeholders, especially parents and the school community should be most proactive in supporting the school by engaging in school activities that promote open accessibility. Once these issues are addressed, we should be able to recognise positive and improved accessibility trajectories. Furthermore, the *Fakalekesi 'o e Tonga Framework* is recommended for all schools to track both students' and teachers' attendance and performance for continuous evaluation, planning for the future, and wise decision making for quality education and learning in Tonga.

I would like to conclude this paper with some reflective questions and examples from the study that may help both administrators and teachers in terms of providing open and quality access to learning and education in Tonga.

Kato 'i he Loto Kato (a basket inside a basket) – a Student Mapping Method

Reflection question for school leaders:

- *As a leader, how do you plan to improve access to education in your school?*

Every school should have an analytical review based on four stages: i) the educational policy (see the relation of the school activities to educational policies and regulations); ii) mapping the zones of educational exclusion (see the status of the students – *secure, vulnerable, and at-risk*); iii) review of research on access to schooling (see access in national, regional, and international levels; comparative studies); and iv) re-conceptualising access (re-define access accordingly to the information collected from stages 1-3.

- *As a leader are you able to map students in your school?*

It is vital for the leader to know each and every individual in his/her school. To understand each individual student, the principal and his/her administration team should file the following documents: school record book, teacher record book, and mid-year/final reports. These documents help categorise students into zones of exclusion (see Figure 2).

ZONES	1 Secure Enrolment	2 Vulnerable	3 Risk
CRITERIA	• High attendance rate • High punctuality rate • High academic performance • Good conduct • Positive attitude • High commitment • Positive effort • High participation • Positive relationships • High progressive rate	• Fluctuating attendance rate • Fluctuating punctuality rate • Average academic performance • Poor conduct • Negative attitude • Low commitment • Negative effort • Low participation • Negative relationships • Repetitious	• Very low attendance rate • Very low punctuality rate • Very low academic performance • Very poor conduct • Negative attitude • Very low commitment • Very low effort • Very low participation • Negative relationships • Repetitious & over-aged

Figure 2: Criteria for categorising students into zones of exclusion (Adapted from Vakapuna, 2019)

Selection System (Enrolment & Transition)

Refection question for school leaders:

- *As a leader, how do you plan to improve enrolment and level-to-level transition at your school?*

I recommend free enrolment from class six to Form 1, free enrolment when transferring from one school to another and free enrolment in all secondary school levels. This recommendation is associated with the multi-grade repetition approach which allows partial repetition, whereby students only repeat the subjects that they failed and move on to the next level with the subjects they have passed. I suggest that the multi-grade repetition approach is applied as its flexible patterns of class teaching and the dynamic inter-relationships of classrooms and curricula are ideal to address this transition problem.

Moheofi Teaching Method – Tauhi Vā Tool

Reflective question for classroom teachers:

- *As a teacher, how can you utilise the moheofi method and the tauhi vā tool in your classroom?*

The method of *moheofi* discussed earlier is suggested for students who are at the at-risk zone of exclusion. Teachers need to regularly attend all school activities and be punctual to his/her classes. The most common problem found in the study is associated with poor attendance and punctuality of teachers. This weakness allows students in the at-risk zone to run away from these classes. To avoid this from happening, teachers should establish good relationships (*tauhi vā*) with his/her students and a homeroom type of classroom so they can treat each student as his/her own. The teacher should lead, direct, scaffold, and guide all activities at the level and interest of students. If a student is absent, it is more appropriate for the teacher to pay home visits to show to both student and his/her parents that they genuinely love and care. This is how *tauhi vā* is used and maintained by teachers who closely follow and practice *moheofi*.

Kali Fanafana Teaching Method – Nahunahu'i Tool

Reflective question for classroom teachers

- *As a teacher, how can you utilise the kali fanafana method and the nahunahu'i tool in your classroom?*

This method continues from the *moheofi* practice. However, the teacher here acts more firmly but remains flexible. The teacher needs to be more directive when dealing with students in both curricular and extra-curricular activities. The teacher is needed here to show students direction and independence then leave them to complete tasks on their own. In this zone, the teacher slowly turns to employ activities that encourage problem solving and good/sound decision making.

Kaliloa Teaching Method – Tofotofo'i Tool

Reflective question for classroom teachers:

- *As a teacher, how can you utilise the kaliloa method and the tofotofo'i tool in your classroom?*

The teaching approach used in the *moheofi* method highly recommends a continuation of the above zone. Here, the teacher becomes a facilitator of learning to strengthen and encourage students to adopt the skill of learning on one's own, to make good/sound decisions and to be able to problem solve. The teacher still monitors student progress in both curricular and extra-curricular activities. This classroom is totally a student-centered classroom.

Fofola e Fala' kae Talanoa e Kāinga' Teaching Method – Talatalaifale Tool

Reflective question for school leaders:

- *As a school leader, how can you utilise the fofola e fala' kae talanoa e kāinga' method and the talatalaifale tool in your school?*

The philosophy of *fofola e fala' kae talanoa e kāinga'* is very important for school principals to practice in his/her school. The principal is the key figure for success in terms of staff and student performance, learning, pedagogy, assessment and so forth. Therefore, the principal needs to fairly and equally address all members of the school community such as to involve all stakeholders in the decision making process. The participation from all stakeholders enhances *fofola e fala' kae*

talanoa e kāinga' and is embedded in *fala tā uho* which provides strong foundation and support for the principal's duties. The connection between the principal and all members of the school community and vice versa should be genuine in nature not only to uphold and maintain relationships but also like they are of true kin and blood ties culminating *feongo'i'aki* (empathy).

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6

Tuli Hono Ngaahi Mālie' 'i Loki Ako: Best Practices for Teaching Mathematics in Tongan Secondary Schools

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Abstract

Mathematics teaching has been looking for best practice that is responsive to today's learners. This is particularly critical in Tonga with the downward trend of mathematics examination results. This article explores the experiences of one Tongan secondary school to understand which practices enhance students' understanding and making sense of mathematics. *Tuli hono ngaahi mālie' 'i loki ako* is a cultural Tongan knowledge and practice used to understand the best practice for mathematics teaching and learning as articulated by both students and teachers.

When teachers use best practice to teach mathematics, students experience mathematics as *mālie* (good, pleasing, and interesting) and ideally, a love for mathematics is instilled in them.

Key Points

These are the key points emerging from the findings:

- *Code-switching is needed for teaching mathematics in Tongan and English;*
- *Group work is essential for mathematics learning;*
- *Clear and simple teacher instructions in the classroom are essential to cater for students' learning needs these days;*
- *Students prefer activity-based learning in order to develop a deep conceptual understanding of mathematics and to develop a positive attitude toward mathematics as a subject;*
- *Increasing the time given for students to respond so that they are able to process the information and make sense of it is critical to students' learning.*

1. Introduction

This paper is focused on a case study investigation of best practice in mathematics at a Tongan secondary school. As the researcher, I have taught mathematics for 21 years across all levels (Year 7 to Year 13). In my experience, I have often seen students often show negative attitudes towards mathematics and associate their learning experiences with boredom and lack of interest. These negative experiences may be contributing to the downward trend of the Mathematics external examination results in Tonga. I believe that understanding negative student experiences will provide important insight into the field of mathematics education. The findings of this project are applicable to schools both here in Tonga and elsewhere in the Pacific region, and can be used to enhance the quality of both teaching and learning mathematics and developing a positive student attitude towards mathematics as a subject.

Teaching and Learning mathematics are inseparable (Ernest, 1991); it is essential for teachers to understand how students learn mathematics so they can teach it effectively. Internationally, mathematics teaching has become increasingly geared towards student-centered rather than the traditional didactic (i.e. lectures) teaching method (Anderson, 2010; Anthony & Walshaw, 2007; Cooney & Wiegel, 2003; Zevenbergen et al., 2004). This shift from lecturing mode towards more active and personal conceptual understanding has already been seen recently in mathematics teaching in the Pacific region (Begg, Bakalevu, & Havea, 2019).

2. Context & Rationale

The paper is based on the writer's Master's Study at the University of the South Pacific. The study was conducted in one secondary school in Tonga, an island Kingdom located in the South Pacific region. The project was to investigate the impact of the SIOP Model in teaching mathematics at Form 5 level at this school. The pseudonym *Mālie Secondary School* (MSS) is used to represent the school in the said postgraduate project.

The Ministry of Education and Training (MET) oversees the education system in Tonga, whether schools are Church, private, or run by the government. MET is responsible for reviewing all curriculums and distributing resources to schools at the beginning of each school year. There are 41 secondary schools in Tonga: 31 are either Church or private, and are 10 run by the government. In 2004, 72 percent of the students enrolled in either Church or private, and the rest studied in the government schools (Akau'ola, 2004).

There are 14 schools of the Church of Jesus Christ of Latter Day Saints established in the Pacific Region; seven are located in Tonga, and MSS is one of them. Mathematics teachers at all 14 Church schools have shifted their mathematics teaching to embrace a more student-centered approach. At MSS, mathematics teachers work together on their professional development by consistently collaborating in the following ways: teacher observations, sharing ideas, co-teaching, and providing constructive feedback on how to adjust strategies that will result in increased student engagement.

In order to improve mathematics teaching and learning there is a need to investigate the best teaching practices. Despite teachers' high aspirations of their students, mathematics learning at MSS has not always resulted in positive outcomes for students. At MSS, the shift to practice more student-oriented or student-centered approaches to learning means teachers are encouraged to place students at the core of their classroom practice. However, to achieve this requires useful and purposeful teacher training and development at secondary schools in Tonga especially at MSS.

2.1 Need for Quality Professional Development & Teachers' Collaboration

There is a need for consistent quality professional development for mathematics teachers in Tonga in order to keep them up to date with the best teaching pedagogies. Across government, private, or Church secondary schools in Tonga, there is variation in the provision and regularity of professional development for teachers. At MSS, professional training is made available for teachers; however, this does not necessarily assume quality. Furthermore, there is a need to increase teachers' collaboration within the school rather than teaching in isolation; if mathematics teachers collaborate, the students' performance within mathematics is likely to improve

(Egodawatte, McDougall, & Stoilescu, 2011). Thus, an important part of this research was to provide a platform for teachers to share ideas about their strategies, new strategies they have used, and find ways for them to collaborate with each other.

More needs to be known about mathematics education in Tonga, particularly mathematics teaching and learning. Previous Tongan mathematics education researchers (Fasi, 1999; Koloto, 1995; Manu, 2005) have formed the basis of literature regarding mathematics education in Tonga. My study adds to this body of knowledge and has positive applications for mathematics teaching and learning at MSS, for MET, and for mathematics teachers and educators in Tonga and the wider Pacific region.

2.2 Teaching Mathematics Effectively

It is important to understand the way teachers view mathematics because it has a direct impact on the way they teach it. For example, Reys et al. (2012) emphasised this notion:

If you view mathematics as a collection of facts to learn and procedures to practice, then you will teach that to your students. If you view mathematics as a logical body of knowledge, you will adopt teaching strategies that let you focus on guiding children to make sense of mathematics. (p. 5)

Teachers' values and beliefs towards mathematics and students' learning is a critical factor in shaping their attitudes and perceptions towards mathematics learning in the classroom (Reys et al., 2012).

The famous Hungarian mathematician George Polya (1887-1985) is well known for his effective mathematics teaching techniques and dubbed the "father of mathematical problem solving". His advice to mathematics teachers was:

A teacher of mathematics has a great opportunity. If he fills his allotted time with drilling his students with routine operations he kills their interest, hampers their intellectual development, and misuses his opportunity. But if he challenges the curiosity of his students by setting them problems proportionate to their knowledge, and helps them to solve their problems with stimulating questions, he may give them a taste for, and some means of, independent thinking. (Polya, cited by Boaler, 2008, p. 26)

It is generally agreed that mathematics teaching should move toward a more collaborative teaching method rather than maintain traditional methods (Anderson, 2010; Attard, 2011; Echevarria, Short, & Vogt, 2008; Hunter & Anthony, 2012; Rogers, 2007; Zevenbergen et al., 2004; Zevenbergen, 2009). In a traditional mathematics classroom, the teacher demonstrated a low-level problem-solving approach and then students imitated their teacher's demonstration (Stonewater, 2005). The teacher's role in these classrooms is to deliver the lesson then quiz students for the right answers (Hunter & Anthony, 2012). This is a problematic approach as it is argued that these old models of mathematics teaching contributed to the students' mathematical incompetence rather than promoting a positive learning attitude toward mathematics (Zevenbergen et al., 2004).

The new movement in mathematics teaching instead focuses on students' cognitive development whereby they will be able to critique solutions, justify, analyse, and make meaning of self-experiences rather than just absorbing information (Attard, 2011; Hunter & Anthony, 2012; Klein,

2012). As a result of such teaching, students will achieve a deep conceptual understanding of mathematical concepts (Klein, 2012). This movement parallels the social constructivist view that students learn better through interaction either with their peers or with the teacher or the materials and construct their own meaning and knowledge (Goos & Bennison, 2007).

Discussing mathematics is one of the vital elements of effective mathematics teaching. An effective teacher will create classroom discussions so students are engaged in reasoning, questioning, and critiquing solutions (Echevarria et al., 2008), rather than just checking for correct answers (Hunter & Anthony, 2012). This practice will enhance students' mathematics proficiency as long as it drives active learning. If the responses are only for use as a solution then students' mathematics proficiency will be at the basic level only (Klein, 2012).

2.3 The Teacher as a Facilitator of Learning

The role of the teacher during the lesson is to become a facilitator and allow the students to explore mathematics and make meaning on their own. Anthony and Walshaw (2007) expounded that the teacher's role is to listen attentively to the students' discussions, and discern when to step in for clarification, throw in another question, keep listening, or settle students' argumentation, and shift the discussion to another problem. This enables the students to process the mathematics concept according to their own way of thinking, to create new meanings, and to own their learning.

Several researchers have examined aspects of meaningful mathematical tasks. Anthony & Walshaw (2007) stated two aspects of a mathematical task are crucial elements of effective mathematics teaching: firstly, the task must be meaningful, and secondly, it must allow students to make connections with real life experiences as well as other mathematical concepts. They described four other aspects that enhance collaborative learning culture where students teach one another and exchange ideas: extended engagement, group work, multi-representational, and catering for diversity tasks.

2.4 Teachers' Pedagogical & Content Knowledge

An effective teacher will have three key competencies: their subject matter knowledge, pedagogical content knowledge, and curricular knowledge (Shulman, 1987). The mathematics teacher must be knowledgeable and well experienced in their content knowledge, concepts, theories, principles, facts, rules, and all relevant information related to the discipline. Effective teachers should also have pedagogical knowledge allowing them to present the subject matter in ways that are meaningful and cater for all students' learning needs. They must also be able to explain alternative explanations and viewpoints related to the concepts. The combination of these three competencies has the greatest impact on what a teacher does in the classroom and how effectively it is done (Anthony & Walshaw, 2007).

3. Methodology

The research methodology used in this study to capture the descriptions of the best teaching practices within Form 5 mathematics classrooms at MSS was the *Kakala* Research Framework. In this paper, the *Kakala* Research Framework is used to frame the research design and process. *Kakala* Research Framework is a holistic framework used to gain in-depth understanding of a

phenomenon and it is appropriate for this work in Tonga and the participation of Tongans in this study because of its relevance to Tongan culture and language (Johansson-Fua, 2009). The *Kakala* Research Framework was originally developed by Helu-Thaman (1997) and comprises three stages: *Toli, Tui,* and *Luva*. As researchers continued to use this research framework, another three stages were added by Helu-Thaman's colleagues: *Teu*, *Mālie*, and *Māfana* (Johansson-Fua, 2009; Manu'atu, 2001).

The humanistic or qualitative approach (Attride-Stirling, 2001) was used because the research is context specific. As the researcher, I was part of and involved with the subjects, and thus, the beliefs, knowledge, and attitudes of the researcher were acknowledged and mediated through the process and the reporting of the study's findings. Humanistic enquiry centered on describing in depth the complexities of human interaction in given settings and, as a result, the analysis of language used in learning and teaching had an important role to play. The theoretical framework for this study is grounded in the social constructivism theory of learning, which assumes that learning is personally and socially constructed, and at the same time recognizes the impact of the social environment on the learner (Cobb, 1994; Cobb & Yackel, 1996).

3.1 Talanoa Method

MSS is one of the largest mission schools in Tonga. The school has approximately 1,100 students. All the mathematics teachers at MSS were selected as participants (labeled as MT1, MT2, MT3, MT4, MT5, MT6) while classroom observation only involved the 3 Form 5 teachers (MT1, MT2, MT3). 12 students were randomly selected from Form 5 mathematics classes using simple random sampling. The data was collected by individual *talanoa* with the mathematics teachers, group *talanoa* with the students, and classroom observations of Form 5 mathematics classes. Ethics approval was given by the University of the South Pacific. Consent letters were issued to the Director of MSS, the mathematics teachers, students, and their parents. The participants were advised that they could withdraw from the study whenever they wanted. The *talanoa* data articulated by teachers and students involved in the study, and through observations of the learning and practices, provide insight into the ways best practice is expressed and the strategies within mathematics classrooms at MSS. Themes from the emerging data were grouped and coded.

4. Findings

4.1 Teachers' Experiences of Teaching Strategies in the Classroom

From the *talanoa* with the six mathematics teachers, five teaching strategies were identified as being common across their practices: (1) modeling of activities and follow-up exercises, (2) group work, (3) questioning, (4) bell work, and (5) lecture. Each teacher used a combination of two or more of the five teaching strategies, but demonstrations, group work, and follow-up exercises were the most frequent combination during mathematics lessons.

4.1.1 Modelling of Activities & Follow-Up Exercises

Five teachers reported regular use of modeling and follow-up exercises in their mathematics classes. Teacher MT5 explained:

I model the mathematical activity, and then let the students do the exercises. When I come back to check the answers, I would show how to get the right answers on the blackboard.

MT6 shared similar experiences and added that if her students did not understand, she would model another activity followed-up with some exercises.

All three Form 5 mathematics teachers used modeling during observed lessons. This activity is a common teaching strategy in the Tongan culture which is called *fakatātā* where the expert/teacher will perform the learning skills while the learners observe. Then learners try to do exactly what the teacher performed, repeating the performance until the learner masters the skill.

4.1.2 Group Work

Five of the six mathematics teachers described using group work and explained the advantages of that technique in those mathematics lessons. One of the main advantages was students freely interacting with their peers when discussing mathematics concepts, teaching each other, asking questions, justifying solutions, and even arguing about solutions. This allowed them to think for themselves and increase their confidence in their ability.

This teaching strategy is common in the Tongan culture and community. For example, *kulupu tou ngāue* would involve a group of men or women who gathered together with common goals, created rules and strategies as to how they would perform, then all working together to achieve the purpose of their group work. They all work together in the plantation or *tou lālanga* (weaving), sharing new ideas, motivating each other, even telling jokes and adding humor to their work, and all diligently working until the job is done. This is a very effective strategy in the villages as working with others makes things easier and faster.

4.1.3 Asking Good Questions

Three teachers talked about the significance of asking good questions and good questioning skills as an important element of effective teaching. MT3 mentioned the lack of student response as a challenge: "I gave them the question…after two minutes, I said, 'okay, this is how it is done'". Many teachers face this dilemma and they end up answering their own questions. MT3 continued, "There was no time to let them think."

MT1 used a variety of questions in his class. He asked a lot of "why" questions to allow his students to think more deeply about the mathematics concept, giving them the opportunity to confirm that they understood rather than merely guessing.

All three of the observed mathematics teachers were aware of the need to give ample time to the students when asking questions rather than answering the questions by themselves.

4.1.4 Bell Work

All three observed teachers used bell work as one of their common ways of teaching mathematics. Bell work is a short and quick on-task activity conducted right at the beginning of the class where students begin the task immediately without wasting instructional time. This activity can be a short review of prior knowledge, or introduction to a new topic, or it can be a fun activity to liven up the students at the beginning of the class.

One of MT2's observed classes used bell work to introduce their new topic. On the bell work section on the board, he provided the definition of a polygon as: "closed figures made up of straight lines", then the instruction "In pairs, discuss and explain why these two figures are not polygon" (one shape was a cone, and the other was an open figure).

Students were discussing why the two figures were not polygon. MT3's bell work was a revised question where students reviewed how to draw a parabola. All 12 students interviewed emphasized the importance of bell work and reported that they looked forward to these activities at the beginning of each class.

4.1.5 Lecture

Three teachers identified lecture as a typical method of teaching mathematics. MT4 mentioned that lecture is a "traditional method of teaching". According to MT1, he formerly used lectures frequently to teach mathematics, but he hardly used lectures in his observed classes, explaining, "I used lectures a lot in the old days, but now I have changed to new methods of teaching mathematics."

Lecture is similar to *fakahinohino* in the Tongan context where the teacher is regarded as the expert who gives instructions. The teacher could be the parent or a knowledgeable person in the village or the community and this method is still practiced today. However more frequently, due to changing of times, students and children are encouraged to ask questions and share their view freely.

4.2 Students' Experiences of Teaching Strategies in the Classroom

Through the group *talanoa* session and through observed lessons, students shared their experiences of teaching strategies that supported them in their mathematics classroom. They identified the following: (1) group work, (2) definitions, explanation, and demonstration, (3) hands-on, fun, and relevant activities, (4) effective classroom management, and (5) use of the Tongan language.

4.2.1 Group Work

All 12 students described group work as one of the best teaching strategies. S13 shared "*'Oku tokoni lahi 'aupito 'a e ngāue fakakulupu' ke u toe mahino'i ange ai 'a e fika'*" (Working in groups has helped me to understand maths better). Similarly, S21 shared *"Ko e taimi ko ia na'a' ne vahe mai ki he ngāue fakakulupu' pea moe tautau tokoua', na'e toe lava ke u mahino'i ange ai hono fai ko ia 'a e fo'i siakale'"* (When he divided us into groups and in pairs, I tended to understand better how to do the circle). S22 and S31 shared similar ideas about group work as those mentioned by S13 and S21. S14 shared that his group members influenced him to work.

These students used terms that described the nature of group work and how it enhanced their mathematics learning: *mahino'i ange* (to better understand), *tokoni* (help), *tokoni'i* (act of helping), *fetokoni'aki* (helping one another), *fevahevahe'aki* (act of sharing), *fengāue'aki* (working together). Group work provides a platform for the students to enhance their understanding and improve their social skills.

4.2.2 Clear Definition, Explanation, & Demonstration

Most students identified clear definitions, explanations, and demonstrations as being important. S11 said that he understood angles better on parallel lines, "because he [MT1] first explained the meaning of the key words". S13 agreed and shared, "I understood after the class how to do the parallel lines (angles) and I liked how he defined the key words right at the beginning".

The key words that MT1 explained at the beginning of the class were transversal line, parallel lines, supplementary, and complementary. When teachers explicitly explain the notes and key mathematical words, it enhances students' mathematical understanding (Echeverria et al., 2008). Furthermore, S34 emphasized the success of this teaching strategy by referring to MT3:

In observation one, she didn't really explain it but she gave us some exercises; but in observation two, she explained it to us in English and in Tongan, and she gave us some key words so we can understand it better.

MT3 used code switching to clarify the meaning of the key words (Manu, 2005); this helped S34 understand better. S22 pointed out the importance of the pace of the teacher's delivery, "I really liked it because he was speaking slowly, not too fast, when he was explaining." MT2's pace of talking met the learning preference of S22, especially his English proficiency level.

4.2.3 Hands-On, Fun, & Relevant Activities

Five students shared how hands-on activities and "fun" in mathematics lessons enhance their conceptual understanding of mathematics.

According to S11: "I really like this strategy which is working out math using my hands; for example, using the protractor to measure the angle in the parallel line".

S14 added, "I also liked that part when we used the protractor. We all participated". This same student stressed the need for the activity to be meaningful, relevant, and connected to the students' background (Anthony & Walshaw, 2007; Boaler, 2008; Echevarria et al., 2008). He said (referring to MT1): "MT1 used a lot of activities that relates with us and really helped us to understand".

However, S31 shared, "I like it better when there are games; games about math problems. Maybe students will understand them better. We all participate".

S34 agreed and referred to their second class observation. He said: "I enjoyed the second class more than the first because the activities were fun and it helped me to understand the exercise better".

According to S34, when mathematical activities are meaningful and enjoyable at the same time, she tends to understand mathematics better.

4.2.4 Effective Classroom Management

Two students shared that effective classroom management is crucial to effective mathematics teaching. S34 said that a teacher demonstrates this factor when "[they] can manage the class well

in order for them to be quiet and pay attention solely to what the teacher is explaining so the class can understand it".

S31 agreed with S34 and added that, "the math teacher has to work to time and not easily give in to students when they complain about having lots of work to do".

According to the students, when a teacher is well organized, they will be able to manage the transition of the activities and be able to get the students engaged without disturbing the others during the lesson.

4.2.5 Use of the Tongan Language

One of the students, S22, strongly believes that she understands mathematics better when the teacher uses the Tongan language: "I prefer a teacher that teaches us in Tongan because he makes the work clearer and we can understand. When we ask questions, he will explain easily also".

S22 preferred this because their English proficiency is low and when the teacher teaches in English, they barely understand it. This makes sense for students who are second-language speakers of English. Both teachers and students face a double challenge here, understanding the language first, and then understanding the content (Manu, 2005).

5. Discussion

This section highlights the five themes that emerged from the experiences of both the teachers and students regarding the strategies that were commonly practiced within mathematics learning. These themes helped to answer the question: what are the best teaching practices used in both teaching and learning Form 5 mathematics at MSS?

All mathematics teachers at MSS shared how their performances have shifted more toward student-centered approaches rather than solely using the traditional lecturing approach. The study provided a platform for mathematics teachers as well as students to reflect on their own experiences in their observed lessons, share what they perceived were the best practices, and how they could do better in their next lessons. The five key elements emerged from teachers' and students' experiences, and are linked to "best practices" within mathematics classroom learning:

1. Group work
2. Clear and simple teacher instructions in the classroom
3. Increased waiting time for students to show their works to the teachers
4. Students prefer activity-based learning
5. Code-switching is needed for teaching mathematics in Tongan and English

5.1 Group Work

All mathematics teachers used group work as a common way of teaching mathematics because in group work situations students are fully engaged in teaching one another, asking for more elaboration, and confirming solutions. MT1 shared his experiences with group work saying, "*I had used grouping before but not very often, but now I prefer group work more because it allows the students to engage and learn from each other*".

All students preferred group work as one of the best teaching practices because they get to: *mahino'i ange* (better understand), *tokoni* (help), *tokoni'i* (act of helping), *fetokoni'aki* (help one another), *fevahevahe'aki* (act of sharing), and *fengāue'aki* (work together). These notions of group work reflect core values of Tongan culture that are about nurturing relationships. As Tongans nurture their relationship with their neighbours or friends they are actually engaging in *fetokoni'aki* (helping one another), *fevahevahe'aki* (sharing), *fengāue'aki* (working together) either at funerals, weddings, or watching out for each other's *kavenga* (obligation). This core value is embedded in the indigenous Tongan education system (Thaman, 2009); thus group work enhances students' understanding of mathematics and improves their social skills in nurturing relationships.

5.2 Clear & Simple Teacher Instruction in the Classroom

It is important for the teacher to use clear and simple instructions when explaining mathematics concepts in English so students can understand mathematics better. The three observed mathematics teachers considered the English proficiency of their students and they made sure they used clear and simple instructions. Most of the students described how this enhanced their understanding of mathematics. They expressed the need for mathematic teachers to define key vocabulary at the beginning of the lesson because it gives students information about the mathematics content, which then enhances their understanding of that mathematics concept.

5.3 Increase Time Given for Students to Respond

All three observed teachers had learnt to increase the waiting time when questions were given to allow students to process their thinking then respond, rather than the teachers answering their own questions. MT1 was able to apply this mode better in his final lesson. He shared that, "Before, I would ask a question and if the students were slow to respond, I ended up answering the question myself".

Teachers were able to provide sufficient time to complete the activities implemented in the lessons. This allowed students to be actively engaged in meaningful interaction with each other such as peer teaching, asking questions, confirming solutions, and even provoking an argument based on the mathematics concept being taught. These experiences will develop a deeper understanding of mathematics and will boost students' cognitive development (Attard, 2011; Hunter & Anthony, 2012; Klein, 2012).

5.4 Students Prefer Activity-Based Learning

The students preferred mathematics lessons to be activity-based. Mathematics teachers must be creative in planning mathematics lessons in a way that connects the students with real life experiences, and that are meaningful (Anthony & Walshaw, 2007). The researcher believes that this is a critical element of effective mathematics teaching which will enable students to make sense of mathematics and trigger new insights about the mathematics concept. However, the researcher saw that this was the most challenging part, but also the most rewarding experience, for students' learning of mathematics. A *mamahi'i me'a* (committed) mathematics teacher will create meaningful activities for their class because they want students to taste success in their mathematics learning.

5.5 Code Switching is Needed for Teaching Mathematics in Tongan & English

Mathematics is all about language first then content (Echevarria et al., 2008). Both students and teachers agreed that one of the challenges in teaching and learning mathematics is language, especially in word problem exercises. According to Manu (2005), both students and teachers face a double challenge when learning mathematics in a second language: (1) the challenge of understanding the language itself, and (2) the challenge of understanding the mathematical task. Therefore, this code switching between English and Tongan is critical to effective mathematics teaching. It is a vehicle for understanding and making sense of mathematics language first then the content.

6. Conclusion

The mathematics classroom continues to be a place of "hit" and "miss" in Tonga. Through *talanoa*, teachers and students were able to share their experiences including their frustrations. The *Kakala* Research Framework allowed for more relevant processes within the research that encouraged the gathering of appropriate findings which assisted the development of this paper. I highlight in this piece that unless teachers shift to more interactive teaching methods, they will continue to practice traditional methods that "miss" opportunities for students to engage in fun and interesting ways in mathematics, particularly at MSS. Effective teaching enables students to engage critically with concepts and operations within mathematics, enabling opportunities for them to engage in problem solving (Polya cited by Boaler, 2008). Students are also required to make sense based on experiences rather than just absorbing information. The goal for teachers at MSS is to enable students to engage in deep conceptual understanding of mathematical concepts (Klein, 2012). This means that teaching practices need to be deliberate in enabling thinking, conceptualization, and problem solving which then allows students to apply what they have learnt to everyday situations. To avoid boredom and lack of interest, secondary school teachers need to avoid using the traditional practices of teaching mathematics.

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7

Student-Centered Learning at the Tonga Institute of Education

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Abstract

The implementation and practice of student-centered learning (SCL), also known as learner-centered teaching (LCT) (Weimer, 2002; Jones, 2007; Wright, 2011), has been challenging for teacher educators at the Tonga Institute of Education (TIOE) given the all-too-familiar teacher-centered approach that has for decades, predominantly and extensively plagued the teaching and learning stratosphere in Tonga. The challenges are shaped by two main factors: the level of teacher educator confidence, and the slow adoption of pedagogical change. The varied challenges within specified subjects and disciplines, the differences in the primary and secondary teaching programmes, and the accustomed teacher-directed learning approach all point to a common concern – *loto si'i ki he liliu´ moe feliuliuaki 'i he fōunga fakakaukau´ moe fōunga faiako´* (fear of change and resistance to altering mindsets and teaching practice).

1. Introduction

As teacher educators proactively involved in the practicum and education programmes at the TIOE, in this paper, we express our collective reflexivities and ongoing *talanoa* (dialogue). The practicum and education programmes enable the application and reinforcement of SCL, particularly through the institute's standard lesson planning, micro-teachings, and biannual practicum visits. This paper deliberates on the prolonged developments and challenges of SCL at the TIOE and recommends a way forward to enable both teacher educators and teacher trainees better understand, appreciate and eventually, adopt the approach for its capacity to stimulate and attain learning outcomes that are more practical and life-long for the learner (Wright, 2011). We also support that SCL fosters learner-independence where young learners eventually acquire the ability to adapt to our ever-changing cultural society and this rapid and complex globalised world. A world they need to become familiar with in order to attain better-quality life standards, further/improved education and easier access to employment opportunities.

2. Practicum & Education Programmes

Since its establishment in 1944, the practicum programme has been the TIOE's major theory to practice platform. It enables a triadic professional-relational space (Haupeakui, 2018) for teacher trainees to practice teaching within a real-life primary, secondary or preschool classroom and school setting accompanied by real-life students and assisted by real-life associate teachers. The institute's essential goal to *Nurture Quality Teachers for Tonga* is further strengthened by the direct and close mentoring of an assigned TIOE teacher educator as assessor/supervisor. The practicum activities range from *observation tasks* and *teaching assessment tasks* specifically designed to help teacher trainees develop a variety of theoretical, content, pedagogical, and assessment skills.

Paramount to these tasks are skills alignment to the compulsory education courses for the primary and secondary programmes also mapped and designed to reflect content-specific requirements essential for teacher training in Tonga. SCL is encouraged in the delivery of these courses to demonstrate, model and eventually, enable teacher trainees to practice a range of skills which foster learner-independence. These skills include: *meticulous planning, creativity, improvisation, self-evaluation, reflective practice, inter-personal and intra-personal skills, self-control, self-discipline, adaptability, teachability, approachableness, patience, empathy, confidence, commitment, time-management, organisation, enthusiasm, communication, multi-tasking, teamwork, leadership, critical and imaginative thinking, low to higher order questioning skills (probing, prompting, redirecting), problem solving, classroom and behaviour management, inquiry learning, respectfulness, love, maintaining and valuing relationships, valuing culture, language, heritage and spirituality*. These courses are:

- ***Professional Standards*** *(Faiako Ma'a Tonga, Langa Faleako Framework, Minimum Service Standards, TIOE Teacher Standards - FATU)*
- ***Teaching Pedagogies*** *(learning styles, teaching & learning theories, questioning skills, grouping strategies, teaching presentation & delivery skills, classroom & behaviour management, lesson planning, micro-teaching & constructive alignment)*
- ***Inclusive Education*** *(establishing inclusive classroom environments, modifying & differentiating instruction, & understanding disabilities)*
- ***Holistic Development*** *(physical, cognitive, emotional, social & spiritual development)*
- ***Educational Psychology*** *(cognitive, developmental, behavioural & socio-cultural theories)*
- ***Educational Research*** *(action & evaluative research)*
- ***Educational Assessment & Evaluation*** *(diagnostic, formative & summative assessments)*

3. Faiako Ma'a Tonga: Langa Faleako Framework

Pivotal to the TIOE, its practicum programme and education courses, is *Faiako Ma'a Tonga* – the ideal Tongan teacher underpinning the Tonga teacher vision and teaching philosophy but more so, the epitome of the *Langa Faleako Framework* (Building a House of Learning for Tonga) – a professional development framework for Tongan teachers (Johansson-Fua, 2004; 2008; Ministry of Education and Training, 2010). The framework simply depicts the structure and formation of a traditional Tongan *fale* (house) and is likened to the gradual progression of the novice to expert *faiako* (teacher). The foundation (*faliki/fakatoka*) represents the TIOE and its fundamental task to nurture the apprentice *faiako* while the four main posts (*pou*) holding the *fale* and connecting it to the land represent the four core Tongan beliefs, values and philosophies known as key streams

in the holistic development and continuous nurturing of the novice, progressed, and expert *faiako*: i). *Pou ko Lea Faka-Tonga'* (Tongan Language), ii). *Pou ko 'Ilo'* (Knowing), iii). *Pou ko Poto'* (Able to do), and iv). *Pou ko Fakafeangai 'a e Faiako'* (Teacher Professionalism). Ultimately, the ideal Tongan teacher is highly required to consistently practice and embody these values in order for him/her to become, and to be considered, skilled and proficient in the teaching profession. Finally, the *'ato* (roof) symbolises a perfected/expert *Faiako Ma'a Tonga*; however, committed to ongoing and continuous professional development and reflective practice to improve teaching and to stay abreast with the best and most recent teaching and learning practices.

4. Student-Centered Learning (SCL)

As mentioned, a particular teaching practice that constantly raises questions and uncertainty at the TIOE is the gradual development of the Student-Centered Learning approach known for its ability to allow students to create knowledge instead of just passively receiving information from the teacher. In other words, SCL allows independent, critical, and deep thinking; hence, encouraging deeper, meaningful and long-life learning. It primarily focuses on what students need to *do* in order to learn rather than on course content or the transmission of information by the teacher. Young and Paterson (2007) categorise SCL within a constructivist approach to learning, whereby it is the critical role of the learner to construct meaning from new information and prior experience. However, regardless of the plethora of pedagogical literature and discourse that support SCL, it has not been entirely or openly welcomed as an alternate or effective learning method at the TIOE.

4.1 Developments

SCL was formally introduced when the TIOE adopted and contextualised Madeline Hunter's *Seven Steps to Easy Lesson Planning* (Hunter, 1982), a systematic and learner-centered method of planning, designing, and implementing succinct lessons. The approach is a simple yet comprehensive lesson sequence that enables teacher trainees to practice SCL through interactive: *Learning Outcomes*, *Introduction, Direct Instructions, Guided Practice, Independent Practice, Assessment & Evaluation,* and *Conclusion & Reflection*. The seven steps place significant emphasis on formative assessment (assessment *for* learning), particularly within guided practice to encourage and ensure there is sufficient drilling (trial and error) through learner-scaffolding. Students are then able to independently practice away from the teacher whose task now is to facilitate learning before students individually embark on a final summative assessment *of* learning which indicates a way forward in their learning as well as the teacher's content and pedagogical approach.

The seven steps coincide with, and accentuate, *Constructive Alignment* (CA) in which *learning outcomes*, *teaching and learning activities*, and *assessment tasks* are in alliance with each other to ensure learning outcomes are met and effective learning is generated and achieved. Biggs (1996) most clearly describes CA as a framework which guides "decision-making at all stages in instructional design: in deriving curriculum objectives in terms of performances that represent a suitably high cognitive level, in deciding teaching/learning activities judged to elicit those performances, and to assess and summatively report student performance" (p. 1). The seven steps and its custom/contextual-designed marking rubric/criteria is used in micro-teachings when teacher trainees rehearse teaching practice in front of their peers while practically exploring an

array of teaching and learning theories embedded in their education courses and the teaching components in subject/content courses. It is also used when they venture out for practicum visits and are required to transfer their practice at the TIOE to a real-life classroom and school context, mostly through the *teaching assessment tasks* which determine and indicate their ongoing progress, praxis and teaching mastery.

4.2 Challenges

While SCL is gradually being recognised at the TIOE as a valuable teaching method, it still remains challenging in practice. The ongoing series of *talanoa* between the authors of this paper established a sequence of two main possible reasons for this challenge. First, from the teacher educator personnel, the actual SCL approach, and finally, the contextual Tongan classroom setting and dynamics through: i) level of teacher educator confidence; and ii) the gradual adoption and adaptation to pedagogical change which alter familiar and customary teacher practices.

SCL is foremost considered a barrier in that new approaches and practices somewhat disrupt the familiar, comfortable and traditional teacher-centered approach. Disturbing traditional routines in order to establish new practices is regarded unnecessary, irrelevant to the passive Tongan learner, and time-consuming given the expectations and requirements teachers already shoulder. SCL itself is greeted with its own share of uncertainties, especially its independence-generating nature as opposed to the accustomed teacher-directed instruction and delivery which places absolute dependence on the teacher. The teacher-directed approach allows teachers to expeditiously, yet ineffectually complete their lessons and units while students are perceived primarily as objects of learning. Some students see this form of exchange as avoiding any form of individual attention or embarrassing 'on the spot' moments and achieve little to none of the intended learning outcomes.

SCL disputes this norm and attempts to alter teaching and learning, but is accused of lacking structure and discipline and poses too much independence for students, jeopardising teacher control and authority. What students are in fact lacking is the skill of learner-independence, a precondition for resilience and adult life where dependence eventually declines and the overwhelming sensation of liberation takes its toll. Are students well prepared to navigate independence through a strict teacher-centered affiliation? This is a debatable issue providing food for thought and action because, at some point, training and preparation is required to allow Tongan students to acquire and perpetuate self-sufficiency and self-reliance. These skills will empower them to thrive, contribute to, and coexist in our ever-changing and developing society and the complex globalised world we live in and continue to explore through diaspora.

In addition, SCL is criticised as unaccommodating to a contextual Tongan classroom setting. Teaching and learning resources for the approach demand more, and often costly, teaching and learning resources as opposed to the commonly-used, cost effective, and inexpensive resources such as chalk, black/white boards, charts and visual aids. Mathematics counters and blocks are also common. Lacking here is the teacher's ability to improvise and utilise available and natural resources, and to understand that not all learning resources are of a dollar value. Over the years, teacher trainees have explored attaining, making and creating available and natural teaching

resources from both the home and outdoor environments, and these have been proven effective. The same can be applied for SCL resources and there is always the option of reusable resources.

A further problem is that classrooms are often not conducive to effective learning given they are mostly small in size for a fairly large student population; thus limiting movement and the flexibility to accommodate group work and any form of space-related SCL activity. Furthermore, in this age of technology, classrooms lack technological equipment, and many teachers require the skills to use and share information via technology for teaching and learning purposes. It is difficult to stay abreast with this mode of learning and explore its SCL opportunities if teacher knowledge and skills are insufficient and information technology equipment is lacking. Given the substantial amount of funding and expert technology support required to overcome these problems of training and resourcing, this is an issue for higher education stakeholders to consider.

5. A Way Forward

Moving forward, SCL first and foremost raises the question of teacher educator recruitment and the need for ongoing staff professional development re-emphasising and reinforcing the posts and the professional development purpose of the *Langa Faleako Framework*. While teacher educators employed at the TIOE are required to teach and train their specific disciplines with mastery and confidence, the education-based component is often lacking. This calls for ongoing professional development sessions, in-service trainings and capacity building workshops to ensure teacher educators are well-equipped and are continuously supported in their roles. A recent and most fortunate assistance has been the TESA (Tonga Educational Support Activities) workshop cycles for literacy and numeracy by the Institute of Education, University of the South Pacific, Tonga Campus. The workshops not only provide evidence-based data on the current status of literacy and numeracy in primary schools around Tonga, but offer ways to improve and prevent concerning patterns that emerged from the data. This was best done through a succession of hands-on workshops capitalising in offering, displaying, modeling, and demonstrating an assortment of SCL-driven activities that are user-friendly and pertinent to Tongan learners of all ages. Given human resource at the IOE/USP are experienced, specialised, and well-resourced in the SCL approach, the collaboration should be further encouraged to continuously help, build, foster, inspire, and strengthen effective SCL practice at the TIOE.

While the challenges of SCL mainly point to teacher readiness, practice, and enthusiasm, it is only fair to execute a full review of the approach to evaluate its effectiveness and continuous suitability for the TIOE; in particular, to explore any conflicting elements within the approach and the institute's efforts to adopt culturally-inclusive/responsive ways and methods of teaching and learning that nurtures, benefits and empowers its teacher trainees and ultimately, the unique Tongan learner. After all, Berg and Clough (1991) argued that Hunter's seven steps is a mismatch for the sciences. Could this also be the case at the TIOE? Could this be the reason for the cynical behaviour towards the approach? Action research on the authenticity and continuous suitability of SCL may lead to better understandings of its extent, entirety, and loopholes; including identification of subject-specific methods and culturally-appropriate, sensitive, and inclusive/responsive ways in which to improve and modify the approach so it continues to be of service and a valuable learning tool at the TIOE.

6. Conclusion

Being Tonga's most long-standing and leading teacher education provider, the TIOE has the responsibility to lead and become abreast with the latest and most effective teaching and learning innovations, practices, strategies, methods and approaches which speak of and express our ways of learning, being, and becoming *Faiako Ma'a Tonga* and as Tongans in Tonga and the diaspora. Cultivating an attitude and thirst for educational advancement and adopting an open mind to effective, relevant and available pedagogies is a practical way in which to navigate through the complexities and dynamics of learning. Let us be agents of change and advocate for better and more productive ways to help and educate our people. Let us become awakened and renewed in our mind-sets and heart-sets and allow optimistic transformative practices direct us to enriching spheres of abundant knowledge, learning and application which in turn, empower us to become of great and useful service to oneself, to others and to the future of quality learning and education in Tonga.

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