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Cover design by Nadya Va'a of Capital Designs

The cover design by Nadya Va'a comprises abstractions of breadfruit leaves and ocean colours illustrating the growth and development of Sāmoa, its natural resources and land. The fale motif represents the social, political, economic and religious structures of Sāmoa, with tapa (siapo) motifs and textures in the design referencing fa'asāmoa and cultural heritage. The diagonal elements from old tapa designs symbolize quantified information.

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Jumping the Institutional Repository Bandwagon: Inferences for the National University of Samoa (NUS)

Rafia Naz, National University of Samoa

Abstract

In this digital era where educational institutions are operating in a digital environment, many have realised the significance of jumping the institutional repository (IR) bandwagon. An institutional repository fundamentally premises on amassing, handling, preserving and publicizing scholarly works generated in a digital form by academia, scholars, and students in universities. The repositories correspondingly function as an inclusive databank of the parent institute, which in turn expedites knowledge sharing and management of research scholarship, enhances discernibility and extensive access, promotes speedy dialogues on research, and certifies long term preservation of documents. This enquiry principally deliberates on the benefits and challenges of institutional repositories (research repository) and it's inferences for NUS. The tenacity is to persuade stakeholders of the academia that it is time for them to exploit ICTs and jump the institutional repository bandwagon.

Keywords: *Institutional repository, National University of Samoa, Higher education (HE), Information and Communication Technologies (ICTs)*

Introduction

Information and Communication Technologies (ICTs) are virtually changing the dynamics of the scholarly milieu and administration of research in Higher Education (Abrizah, et al., 2017; Bhardwaj, 2014; Giesecke, 2011; Marsh et al., 2017; Rieh et al., 2007). Institutional repositories (IR) in this regard have emerged as a platform for sharing research (Lagzian et al., 2015) and have been witnessed as an innovative model for accumulating research outputs (Lynch, 2003). IR is a massive databank that has been set up to manage, share, access, and record a scholars' datasets (*Uzwyshyn, 2016).* Advocates that have deliberated on the benefits of IRs, admitted augmented knowledge sharing, heightened control over the digital assets of the academia, and improved preservation of documents (Crow 2002a, b; Gibbons, 2004; Rusbridge et al., 2005; Yeates, 2003), whilst Crow (2002a, b) stipulated that the scholarly work produced by individuals, faculty, and students of an institute remained accessible both internally and externally with certain confines on accessibility. *Uzwyshyn (2016) postulates that IRs* permit enhanced scrutiny, substantiation, appraisal, transparency, and authentication of the scholars' outcomes by other professionals. IRs further hastens prompt access to internationally dispersed researchers who are conferred to share, comprehend, and synthesize outcomes. The author further advances that the community of scholars' benefit from online sharing, collaboration and aggregation of scholarly statistics (*Uzwyshyn, 2016).*

The rudiments and significance of IRs from the reviews indicate enriched web presence, discernibility and reputation, centralisation of research outputs, standardisation, improved research performance, reduction in publishing expenditures and wearying access barriers (Ahmad et al., 2012; Barwick and Pickton, 2006). Other returns comprise of data mining (Oliver and Swain, 2006; Pinfield et al., 2014) and enhanced data planning and management (Gibbons, 2004). Holland and Denning (2011) advise that IR is a research assessment instrument. Based on the comprehensive reviews on the returns and eminence of IRs, the next section discusses the Challenges of developing and implementing an IR.

The Challenges of Developing and Implementing an Institutional Repository
Academic analysis reveals a number of predominant challenges in developing and implementing IRs at universities. These range from issues of culture change (Grieg, 2005), contemplation on the category of users when implementing repositories (Aschenbrenner, 2008), researchers' reverence towards full-text versus abstracts or citations (Bansode, 2011), handling diverse users and the overall administration of repositories (Johnson, 2002). MacMillan (2014) correspondingly establishes that research cultures differ widely. Johnson (2002) also debated that the contest of IRs is for national studies to match up to global scholarships (Johnson, 2002). Arlitsch and Grant (2018) further hypothesised that the fragmented environment of IR domino effects on the impediments. Efforts and costs are therefore replicated, frequent software platforms and versions are succeeded concurrently, metadata are applied contradictorily, users are served second-rate, and archives are incapable to take advantage of collective data about content and users (Arlitsch and Grant, 2018).

Other studies highpoint a broad spectrum of impediments that impact scholars' readiness to share their own data. One of the explanations of course is lack of supportive research data infrastructure (Kuipers and Van der Hoeven, 2009; Tenopir et al., 2011). Tenopir et al. (2011) states that the inclination of scholars' is adversely obstructed by the deficiency of the scholars' knowledge concerning prevailing systems. Ogburn (2010) advocates that curating research data dictates renewed strategies and practices for engaging with the academia. Lyle (2014) in his study endorses the requisites of encompassing a consortium of institutional associates whilst McLure et al. (2014) ponders on the essentials of data management tools in executing best practices that ease data proprietors to articulate and communicate their data for preservation. A fundamental contest in mounting a data repository is delineation of a metadata schema that will admit diverse datasets while accumulating standardization to permit deposits to be effortlessly examined (Hourclé, 2008; Orchard, 2014). Simons and Richardson (2012) highlight the requisites of developing skill sets for its users allied to repository software usage. He further reflects on access apprehensions such as copyright legislature and open access standards. Lynch's (2003) research discourses on policy issues. Likewise, Prabhakar and Rani (2017) discourse on the prominence of framing policies, standardizing bibliographic details, examining copyright policy and persuading faculty to deposit their scholarships. The authors comment that the triumph of IRs is subject to the readiness of scholars to deposit their scholarship. Institutions essentially ought to create awareness on the prominence of IRs and its preservation must be an institutional strategic goal (Prabhakar and Rani, 2017).

Methodology
This study has undertaken an exploratory review of the secondary literature sourced from internet; mainly journals, conferences, books and book chapters. This enquiry principally deliberates on the benefits and challenges of institutional repositories (research repository) and it's inferences for NUS. The tenacity is to persuade stakeholders of the academia that it is time for them to exploit ICTs and jump the institutional repository bandwagon. This enquiry is confined to NUS and the research implications are institution specific. Given the varying context of the institutional milieu of countries, the implications and conclusive findings may not be directly fixated in another scenario. The variables discussed may vary given the contextual changes. This enquiry has not undertaken any investigation on human subjects therefore, ethics clearance pertaining to that was not deemed essential.

Discussion: Inferences for NUS
Firstly, an institutional repository for research will afford NUS the prospects to build a digitalized platform in which the affiliates of the university would be able to deposit their scholarly works in a digital format. Given that the digital resources would be inputted by the students, faculty and members of the university, this digital content would be easily archived. This then becomes the source of intellectual capital for the NUS. The current D-space needs to be further enhanced.

Secondly, IR would augment knowledge sharing/transfer within NUS. It would conceivably stimulate visibility of scholar's research endeavors and permit enhanced access. These enhanced levels of accessibility could likewise bolster unanticipated discovery traversing multiple disciplines that may not have been conceivable formerly. Staff would be able to identify common research areas/interests for cross-disciplinary and cross-faculty research – this is the starting point of building research capacities and accelerating research. Users of the IR would also gain as they would be able to access the system internally, externally and from anywhere 24/7.

Thirdly, digitally archiving research output will empower NUS to centralize research in a distinct location via its software. This will provide pertinent analytics to track research performance data across the university/disciplines. It will also set the impetus for homogenizing institutional record keeping. Heightened research relevance, quality of scholarly work and impact factor will augment data analytics enabling NUS to benchmark to other national and international universities.

Fourthly, building a research culture appears noteworthy. For NUS, this means building capacity in its staff and students to undertake research. This entails providing leadership and top management support, enabling funding and setting up incentives/schemes for grants, instituting research programs, aiding staff and students via training and development (workshops, seminars, mentoring, etc), setting up clear policies, practices and guidelines for research, setting parameters for research ethics and monitoring the behavior of scholars, overcoming bureaucratic hurdles and stimulating cross-disciplinary research. It further signifies building greater research cognizance and pursuing stakeholder insights on avenues for crafting/revising existing systems, processes, & policies for improved research governance, administration and ethics. This also calls for collaborative research amid faculty and students, faculty and other staff, or collaborative research with other universities/agencies. Facilities/equipment and infrastructure also strengthen the capacity building initiatives. Once research culture is strengthened, the researchers can be easily classified as research active and their research load can be measured. This will again set the stimulus for policy development regarding staff workloads. At NUS, it is important to build communities of practice. This can be encouraged through discussion forums, research colloquiums etc whereby scholars can engage in productive knowledge sharing.

Fifthly, ICTs will provide NUS the edge in storing academic content electronically and archiving and preserving it. This would mean that the NUS university library need not be overcrowded. Contemplation would be regarding the costing for journals.

Sixthly, NUS needs to scheme out the requirements for software, hardware, architecture, and training. It needs to identify and classify the user groups impacted, gauge the apprehensions of stakeholders, ponder on access issues, deal with copyright issues (legal framework), decide on open access issues and map out the systems, policies, procedures and guidelines that will facilitate the development/implementation of IRs.

Finally, at an institutional level, there's a need to draw on the models, best practices and strategies/guiding principles from affiliate institutions to build communities of practice to reflect and set the stage for NUS modelling and best practices.

Conclusion
It cannot be blatantly claimed that this study has exhausted the strategies/guidelines on how an institutional repository (IR) should be developed and implemented. Nor does it contend that the inferences of IR for NUS are definitive in deliberation. There could be promising firsthand insinuations from stakeholders. Developing and executing a digital platform will provide countless leverage to

NUS. It would be well positioned internationally as it accumulates, archives, preserves, and showcases the scholarly outputs of its institution to other institutions, think-tanks, private sector organizations, NGOs, governments or to its stakeholders. In leveraging this, it can not only enhance its scholarly prominence, but gauge its usage and assess the impact of the NUS research scholarship. This will further provide analytics to validate the University's research quality and excellence in line with the Strategic Goals of the University.

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Learning Analytics in Higher Education: Implications for the National University of Samoa

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Abstract

In this digital era where educational institutions are transforming in a digital environment, many have realised the significance of learning analytics to augment student learning. This enquiry primarily discourses on the benefits and challenges for Higher education and its implications for the National University of Samoa. The purpose is to consolidate all the efforts of the different sections of NUS dealing with teaching, learning, assessments and student data to enhance its consultative process with the aim of strengthening its data competence and data management processes. The enquiry proposes that relevant sections within NUS work together to introduce and adopt Learning Analytics for improved Teaching and Learning Excellence at the University.

Keywords*: Learning Analytics (LA), National University of Samoa (NUS), Digital technologies, Teaching and Learning (T&L), Stakeholders, Students, Learners, Strategy for the Development of Samoa, Strategic Plan (SP)*

Introduction

Digital technologies are fundamentally altering the dynamics of the Higher Education (HE) sector, impacting Teaching and Learning (T&L) practices, and enabling more access to data from virtual learning environments. This has been attested as judicious in augmenting the scholarship of learning (Broadbent and Poon, 2015). The fundamental shift has been on excellence in education (Lee, 2017) and to attain this goal, HEs are acclimatizing Learning Analytics (LA) to better comprehend and support learners. LA has gained impetus and will continue to advance and revolutionize rapidly (Schumacher and Ifenthaler, 2018).

According to Ferguson et al. (2016) in the *Joint Research Centre Science for Policy Report*, LA refers to the measurement, collection, analysis and reporting of data about learners. The tenacity narrates to comprehending and enhancing learning and the environments in which it emerges. LA encompasses an extensive variety of data and methods for scrutiny, for instance, statistical tests, explanatory and predictive models, and data visualization (Arroway et al., 2016). Ferguson et al. (2016) considers that LA has gigantic prospective of progressing student experiences at academia, by consenting the institute to deliver targeted and personalised support and assistance to each student. The benefits attested include, upsurging retention rates, availing enhanced feedback, capturing students' attendance data and enhancing T&L. It is further argued that LA is a dominant tactic for institutions to attain their strategic goals and that all HEIs must contemplate on hosting an apposite LA system to augment student performance. The *2020 EDUCAUSE Horizon Report*[1] *argues that the uptake of LA for student success is intensifying and this is mainly attributed to: technology, essence of facilitating students' goals and innumerable ethical and policy contemplations.* Ferguson (2012a) on the other hand, contends that LA is driven by three key factors, big data revolution, online learning and national concerns. The *2020 EDUCAUSE Horizon Report claims that as the factors impacting LA increases, this is correspondingly mirrored via augmented pressure for staff to address student outcomes in HE. Millions have been spent on LA at universities and Google Apps for Education (GAFE) is on the verge of*

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reaching 110 million users by 2020. The essence of deploying LA has been tied to early warning alerts regarding student performance and the capacity to enhance proactive outreach[2]*.*

LA is still in its premature stages in Europe (ET 2020 Working Group on Digital Skills and Competences, 2016, p. 2; Newland et al., 2015; Sclater, 2014), when paralleled to the US and Australia. This is confirmed by the first results from the SHEILA Project (Tsai and Gašević, 2017). Yanosky and Arroway (2015) discourse that there is greater attentiveness towards monitoring or evaluating student progress than forecasting learning success or propositioning intervention plans. Additionally, whilst LA remains a concern, the precedence is yet to be realised in many institutions (Arroway et al., 2016) including NUS. This was also discovered by Colvin et al. (2015) that only two (2) out of the thirty-two (32) institutions in their study reached the advanced stage of LA. Current scholarships of LA in HE unequivocally stresses its practice in HE settings (Ferguson and Clow, 2017a; Ihantola et al., 2015; Leitner et al., 2017; Nunn et al., 2016, Sin and Muthu, 2015), although corresponding research focuses on educational contexts overall (Ferguson et al., 2016; Jivet et al., 2018; Nistor et al., 2015; Peña-Ayala, 2018).

Ferguson and Clow (2017a) in their study assessed whether LA progresses learning practices in HE and it found four propositions of LA: a) they advance learning outcomes; b) they support learning and teaching; c) are deployed extensively; and d) are used virtuously. Wong's (2017) scholarship elucidates that LA helps institutions in reaching verdicts. LA expedites assessment of the usefulness of pedagogies and instructional designs for enhancement and helps to monitor meticulously students' learning and diligence, envisage students' performance, distinguish detrimental learning behaviours and emotive states, and ascertains students' at risk. This further promotes proficiency at the institutional level permitting the execution of swift interventions. This study illuminates that LA equips students with indicative data which heightens comprehensions of their learning experiences and affords a more engaging climate stimulating reflection and enhancement.

The essentials and significance of LA in HE based on the reviews indicate that it eradicates impediments to retention and student success and enables HEs to craft personalised learning environments (Baer et al., 2013; Robinson et al. 2016), as student success is dependent on retention, student diligence converts a critical institutional motive (Robinson et al., 2016). The consumption and usage of digital technologies (learning design coupled with learning analytics) has significantly and proficiently progressed student tracking and retention (Long and Siemens, 2011), stimulated superior academic performance, improved retention and graduation rates (Rienties et al., 2016; Star and Collette, 2010), enhanced student satisfaction (Rienties et al., 2016), promoted student engagement and learning practices (Worsley, 2018), plunged attrition rates and heightened motivation and belongingness of students' (Sclater et al., 2016). Scholarships further stipulate that LA benefits HEs via targeted course offerings; curriculum improvements; enhanced student learning outcomes, behaviours and processes; tailored learning; enhancements in trainer performance; post-educational engagement prospects; and augmentation of didactic scholarship (Nunn et al., 2016). Likewise, other scholarships acknowledged improved decision making capabilities and premeditated interventions as remedial measures for improved student learning and for tracking students at risk in universities (Fidalgo-Blanco et al., 2015; Karkhanis and Dumbre, 2015).

Based on the comprehensive reviews on the returns and eminence of LA, the next section discusses the Challenges of LA in HEs.

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[2] *2020 EDUCAUSE Horizon Report.* Teaching and Learning Edition. EDUCAUSE, Louisville. Retrieved from: https://library.educause.edu/-/media/files/library/2020/3/2020horizonreport.pdf?la=en&hash=DE6D8A3EA38054FDEB33C8E28A5588EBB913270C

Learning Analytics and the Challenges for Higher Education

Educational analysis discloses a number of predominant challenges in up-taking LAs at universities. These issues range from evidently setting a vision that is meticulously aligned with institutional priorities and ensuring that the development of the vision follows a consultative process, is regularly visited, and that the awareness and support of key stakeholders is rendered readily. This requires leadership, stakeholder consultation, analysis of the changes and working closely with students (Ferguson and Clow, 2017b). Criticisms indicate the abnormality of LAs where the university becomes the sole stakeholder monopolising decision-making power and conclusively draws the scope, delineation and use of scholastic data without pursuing the feedback of its other stakeholders – precisely students. (Slade and Prinsloo, 2013).

Other scholars discourse on issues encompassing; dearth of leadership, absence of pedagogy based approaches, insufficient training, scarcity of scholarships empirically to authenticate the impact of LA in HE and deficiency of LA specific profiles (Arroway et al., 2016; Yanosky, 2009; Yanosky and Arroway, 2015). Additionally, lack of skills, absence of readiness amid staff and students (Arnold et al., 2014; Wasson and Hansen, 2016), students' literacy pertaining to data literacy (Wolff et al., 2016), social and cultural challenges (Siemens, 2019), ethical concerns of privacy and data protection (Ferguson et al., 2016; Gedrimiene et al. 2019; Kwong et al. 2017) and multifarious risks pertaining to privacy, equity, and control over critical infrastructure (Allen and Feehan, 2019) have been discoursed. Correspondingly, Nunn et al. (2016) identified that pursuing, assembling, appraising and scrutinising data for LA, as well as an absence of linkage to learning science, coupled with the requisites for learning environment optimization pose numerable challenges. The authors further add on issues concerning ethics and privacy (Nunn et al., 2016). The juncture of learning design and academic performance may also generate issues (Nguyen et al., 2018). Gašević *et al. (*2016) scholarship illuminates three main subjects in LA application, namely, the development of predicators and indicators for various dynamics (e.g. academic performance, student engagement, and self-regulated learning skills); the use of conceptions to explore and construe data and to prompt educative actions; and the derivation of interventions to contour the learning environment.

Methodology

This study has undertaken an exploratory review of the secondary literature sourced from the internet; mainly journals, conferences, conference proceedings, reports, books and book chapters. This enquiry primarily discourses on the benefits and challenges of LA for Higher education and its implications for the National University of Samoa. The purpose is to consolidate the efforts of all sections within NUS to engage in a consultative process with the aim of strengthening its data competence and data management processes. This enquiry is confined to NUS and the research inferences are institution specific. Given the unpredictable contexts of the institutional milieu of nations, the implications and irrefutable claims may not be relevant in another scenario. This enquiry has not embarked on any examination of human subjects thus; ethics clearance was not deemed essential.

Discussion: Implications for NUS

Against the backdrop of access to data mining technologies and the rapid advancement and impact of digital technologies, LA has taken precedence as it befits pecuniary and policy strengths for decision making. Having said that, NUS is striving towards T&L excellence which is strategically aligned to the Strategy for the Development of Samoa. The fact that its student recruitment is national as well as international, the key focus should be on its strategic positioning to entice students nationally, regionally and globally. To this end, attaining this competitive advantage in the HE sector requires NUS

to be agile and adaptive in dissecting the challenges of the 21st century to capitalise on the snowballing prominence of data and learning analytics for the education sector.

In order to introduce and adopt Learning Analytics for improved Teaching and Learning Excellence at NUS, institutional leadership, support and commitment has to be requisitely modelled. This should set the impetus for driving governance practices at the university and for formulating key policies, strategies, frameworks and guidelines for LA data collection, synthesis and evaluation. This is also crucial for driving an open, bottom up consultative process of stakeholder consultation and appraisal regarding LA tools, methodologies, processes etc. It will also permit NUS to draw institution-specific frameworks/models. The consultative and participatory approach will further equip NUS to draw best practices from affiliate universities, nevertheless remaining cognizant of the social-cultural and other country/institution factors in mind. Stakeholder debate is critical for increasing awareness, boosting higher standards, generating dialogue on pertinent issues and improving the application of LA at NUS. Active student engagement is a key as well. This requires student voice and representation, and of course students' consent to pave learning pathways and devise intervention strategies.

The implementation of LA tools and systems also requires infrastructural support encompassing software, hardware, standards, legal, and standardisation issues, data protection, copyright, access, privacy, etc. To draw the LA roadmap, the establishment of a task force addressing key strategic objects deems vital. The task force ought to assess the current T&L practices, systems and processes and perform a cost-benefit analysis in light of new frameworks, models and stratagems. The role would also require alignment amid pedagogy and assessment. Scaling up from a traditional approach to an automated system requires developing a plan, up skilling staff and students, raising awareness on the measures of student performance and the types of data sets to employ, understanding T&L quality indicators, aligning pedagogy and assessments, tracking poor performers and students' at risk, monitoring attrition and retention coupled with exploring student satisfaction and failure rates.

Capacity building is another area worth reflecting on. It is pertinent to assess the readiness of staff and student's engaged in the LA environment. Assessment will definitely point towards training, professional development and capacity building initiatives required at the institutional level for acclimatizing LA for improving Teaching and Learning Excellence.

The funding model needs identification and the transformation needs to be planned systematically and phased out keeping in mind the bottlenecks. Integrating the silos and integrating across the sections of data would be quite challenging and needs proper project planning and management. LA would be beneficial for institutional research, academic development, enhanced planning and quality assurance and for increasing student success at the university.

NUS must enhance its data capability and data management policy and on this note collaboration with other affiliate universities should set the foundation for a robust progress of LA methods and tools at the institutional level.

Quality assurance (QA) teams also play a predominant role and at NUS, while the Academic Quality Unit is charged with ensuring the QA of NUS programs, AQU, faculties and Senate plays a vital role in the assessment and assurance for validating/scrutinising the robustness of the tools, stratagems, methods etc which would be implemented. It would also pinpoint towards the validity and reliability of LA.

It is understood that as the Education sector accumulates a wealth of data, NUS also generates and consumes massive volumes of data daily. Nonetheless, NUS has not yet leveraged LA to capitalise on the gigantic prospects offered via the data revolution. It is lagging behind other universities in this

area. It is judicious for NUS and the university staff to be equipped with the resources and capacity to manage data well. Otherwise, it would lag behind and students' would be inept, and would slip out on many promising learning and support benefits.

NUS also needs to be prepared for the mounting mandates for more prompt data in the coming years, from the government, the HE sector and the community, and thus the university needs to embrace the virtuous data management approaches of LA.

At the national level, it is imperative to improve assessment checklists for LA, utilising the models and frameworks and appraising quality indicators for LA at the institutional level. This also calls for more research driving scholarships on LA, its tools and methodologies, approaches, and frameworks and models. The research culture needs to boost studies on LA adoption, usage, and effective practice.

Conclusion

The National Vision for education in Samoa is, "for every Samoan to enjoy an improved quality of life premised on improved education and strengthened cultural and traditional values"[3]. This is the impetus leading the establishment of the NUS Strategic Plan in which T&L enhancement mandates an institutional priority, dictating committed strategies and structures (Ibid). NUS currently has a TEL policy and we need to fully implement it to realise the full benefits of TEL for NUS students.

Digitalisation has transformed the educational milieu and digital learning is manifested in multi-fold ways at universities. Now, the call is for universities to strategically deploy it. It is of great prominence that NUS embraces learning analytics under vibrant guidelines that are grounded in its socio-cultural, economic, political/legal and international settings specific for its context and this must precisely be founded on current best practices for LA. As is already stipulated in its Strategic Plan, Clause 2.1.3, p. 12 (Ibid), one of the Key Performance Indicator for T&L Enhancement is increasing access to Technology Enabled Learning (TEL) methods and tools and measuring the impact of TEL on students' learning, research and teaching (Ibid). LA in this regard ties in with the KPI.

This paper is merely advocating for NUS to consider LA, its benefits and relevance for T&L enhancements and for institutional progress and maps its way forward through internal dialogue with key stakeholders within the University and with think-tanks to achieve a sustainable model of LA. Of course in driving this forward, it will encounter a few bottlenecks along the way; however, these will need to be managed.

This paper is a preliminary attempt to add value to the way NUS collects and uses data on students' learning to enhance not only the learning but increase completion rates. It intends to pave the way for NUS to consider LA as a means of enhancing its Teaching & Learning programmes and to provide some discussion points for internal consultations. Once the concept of LA and its benefits is made known to all relevant sections of NUS, a way forward for LA will certainly be made clear.

This paper aims to engage NUS in an internal consultative process with the aim of enhancing its data competence and data management processes.

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Consumer Attitudes towards Segregated Waste Management Practices: Policy and Marketing Implications for the National University of Samoa (NUS)

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Abstract

This research explores consumer attitudes towards segregated waste management practices. It discusses NUS's community waste management initiative, the interim waste management plan, followed by the need for a waste management policy for NUS. This research also deliberates on the predominant role of the University's partnership with the Samoa Recycling and Waste Management Association (SRWMA) for the successful sustainment and marketing of segregated waste management practices at NUS. This study further presents the NUS and SRWMA Marketing Project through its Faculty of Business and Entrepreneurship (FoBE) and Governance, Policy and Planning (GPP) division to collaboratively implement and increase market outreach.
Keywords: *waste management, NUS, waste segregation, SRWMA, policy, marketing, consumer*

Introduction

Community Waste Management Initiatives at the National University of Samoa

The National University of Samoa (NUS) was established on February the 14th 1984. The establishment of the NUS was seen as the pinnacle of post-secondary education and training in Samoa. Since the establishment of the NUS, a number of initiatives have been implemented to address the general disposal and segregation of waste. Although these initiatives were well intended, they lacked strategic direction and sustainability. This is stated in the Interim Management Plan 2020–2021:

> *'Other than the existing, cooperate procedures and operational collection, storage and transportation of waste; the waste management of the NUS has never been addressed in formal writing or policy in the past. All past and existing efforts to address waste management at the NUS have been conducted in the form of projects and donations that are not direct results of NUS policies, strategies and plans.'*
> (NUS Interim Waste Management Plan, 2020-2021)

It is clear that all waste management projects and initiatives conducted before the initiation of the Interim Waste Management Plan were community led and not driven by the institution itself. One of the early waste management initiatives was developed and implemented by a Japanese corporation, Yazaki Samoa Company Limited (Co. Ltd). The Yazaki Group is an international automotive manufacturing corporation with factory stations in various locations around the world. Yazaki Samoa Co. Ltd (hereon referred to as 'Yazaki Samoa') was established in 1991 and was the largest private employer in the country (Tsujita, 2002). The Yazaki Samoa driven project was aimed at collecting export waste aluminium cans as part of the corporations 'Promoting Global Environmental Management' initiative (Yazaki, 2004). The project included the distribution of blue collection cages in various locations within the Apia and Vaitele urban areas, which included the NUS. The project was unfortunately short lived as Yazaki Samoa ceased operations on the 25th of August 2017 due to a change of business environment (Automotive World, 2017). The only evidence of the project's existence was an abandoned empty blue cage collecting rust at the main NUS Le Papaigalagala Campus.

The National University of Samoa Social Events Committee (NUSSEC) in 2017 jointly funded rubbish bins with the Lausinasina Dancing Group for the Le Papaigalagala Campus made out of iron barrels cut in half and welded to supporting stands. By 2019, none of the iron rubbish bins were in use due to the rust and deterioration caused by the tropical Samoan climate. The NUSSEC also led a 'Working Bee' campaign from 2016–2019 which encouraged staff and students to dedicate the last working hour of pay week Friday to picking up rubbish around the NUS campuses. This initiative eventually lost its momentum when the University ceased its social sporting events and its usual pay week recreational staff-get-together Fridays commonly referred to as the 'Staff Bar' due to the University's administrative troubles in 2019 (Ilimaleota, S, personal communication, 28 September 2020). The continuation of past initiatives is critical to ensuring NUSSEC projects are sustainable. This is especially difficult when members are re-elected annually and disrupts the group momentum.

Interim Waste Management Plan 2020–2021

To commemorate World Recycling Day, the NUS in partnership with the Samoa Recycling and Waste Management Association (SRWMA) and the Ministry of Natural Resources and Environment (MNRE) launched the NUS Interim Waste Management Plan on the 18th of March, 2020. The formulation of the plan was a result of an enquiry to the NUS Vice Chancellors Committee by the University's Occupational, Health and Safety Officer in 2019. The Interim Waste Management Plan aligns itself to the United Nations Sustainable Development Goals, the National Waste Management Strategy 2018–2023 and the NUS Corporate Plan 2017/18–2020/21. The Interim Waste Management Plan is the first strategic document produced by the University to sustainably address waste management. Unlike the community driven waste management initiatives, the Interim Waste Management Plan targets policy, research and marketing in addition to addressing waste management matters pertaining to procedures and infrastructure. This is clearly indicated in its action plan which places emphasis on policy, research and marketing as demonstrated in the below figure.

Figure 1: Interim Management Plan Action Plan

NUS Interim Waste Management Plan 2020 – 2021 Action Plan		
POLICY	**MARKETING**	**RESEARCH**
• Development of a Waste Management Policy; • Draft Waste Management Plan 2022 – 2027.	• Establish Student Waste Ambassador Programme in collaboration with the National University of Samoa Student Association; • Waste Awareness Workshops and Seminar Programme; • Community Involvement.	• Staff and Student Perception Survey • Conduct NUS Waste Audit; • Establish Waste Management Database.

Note: The above figure is not inclusive of other activities in the NUS Interim Management Plan Action Plan that do not associate with the terminologies policy, marketing and research.

Policy, research and marketing are the main components that make the Interim Waste Management Plan distinctive from previous initiatives at the NUS. These three components are significant to what will make the Interim Waste Management Plan sustainable in the long run. It is vital that these three components go hand in hand as they supplement one another. Research informs the policy, and marketing promotes the policy and the results of the research.

Introduction of Segregated Bins

As part of the launch of the Interim Waste Management Plan, SRWMA and MNRE donated 25 segregated bins to the University for general waste, aluminium cans, plastic bottles, and also electronic and oil wastes (Mayron, 2020). The segregated bins were distributed throughout the various targeted areas in the Le Papaigalagala Campus. With an approximate student population of 3273, the segregated bins were allocated based on function and student population within particular areas of the Le Papaigalagala Campus (NUS, 2020). Although the existing aluminium and plastic recycling stations have been strategically placed, there is a clear need for more recycle stations to better capture the waste distributed throughout the Le Papaigalagala Campus.

The map below identifies these targeted locations:

Figure 2: Map of Segregated Bins on the Le Papaigalagala Campus
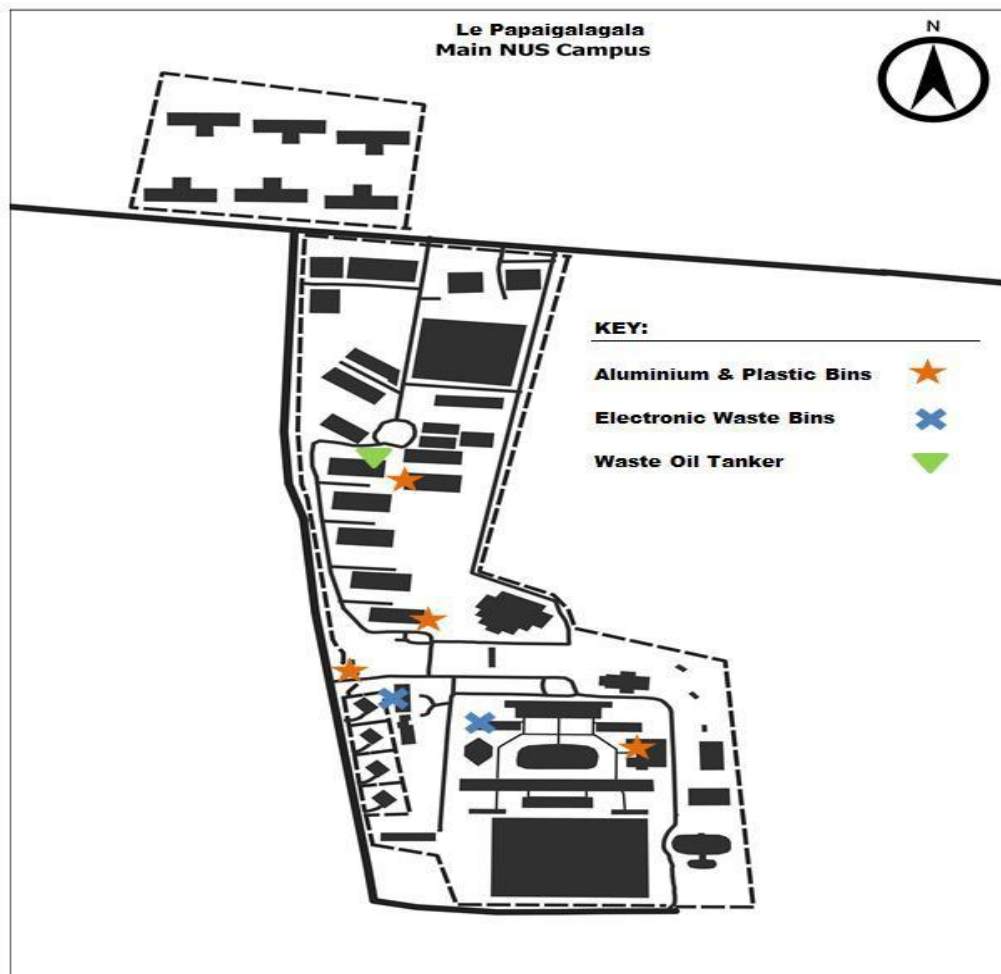
Prior to the launch of the Interim Waste Management Plan and the Yazaki Samoa led initiative, segregated bins have never been introduced formally to the NUS. Segregation of rubbish is relatively a new concept and practice to Samoa as a whole, and consumer awareness is still a major concern (Mayron, 2019). This is clearly evident at the NUS with the segregated bins constantly being misused for general waste. The presumption is that the misuse of segregated bins is due to the lack of awareness and legislation both nationally and within the NUS. This is also suggested by Begum (2009) who has linked it to consumer behaviour. Existing reviews on Higher Education Institutions (HEIs) has treated waste as a material specifying its composition and inventive ways to deal with it to lessen the bulk of dumping material (Armijo de Vega et al., 2008; Babich and Smith, 2010; Felder et al., 2001;

Mason et al., 2003; Mbuligwe, 2002). It is prudent to study and examine the behaviour of consumers to comprehend why the consumers are generating so much waste within the university setting and to be able to vigorously implement initiatives to avert it. Precisely, it is prerequisite to move away from customized methodologies that frame the problem of waste as one at the consumer level in order to account for behaviour to wider factors mirrored in the administration of the institution in its ordinary practices and conducts, a stance that is presently absent from policy (Evans et al., 2013). In order to capture and change consumer behaviours, a civic and 'people-first' approach should be deployed to sustainably change attitudes towards segregated waste management practices (Zarine, 2018). A strong step in the correct direction is to progress supporting legislations.

Need for a Waste Management Policy for NUS

The implementation of the Interim Waste Management Plan will not be successful without the development of supporting legislation. Supporting legislations will provide the grounds for the University to strategically and lawfully enforce its Interim Waste Management Plan. This is why the development of a waste management policy as stipulated in its action plan is very important. The waste management policy will make it mandatory for rubbish to be segregated within all the NUS campuses. The crucial element to writing a good policy is similar to that of research; it has to be built upon what already exists. The waste management policy has to be aligned with existing national legislations. This includes but is not limited to the following:

- Waste Management Act 2010
- Pesticide Regulation 2011
- Health Ordinance 1959
- Ministry of Health Act 2006
- Strategy for the Development of Samoa (SDS) 2017-2021
- National Environment Sector Plan (NESP) 2017-2021
- The National Chemical Profile (NCP) 2010
- National Waste Management Strategy (NWMS) 2018-2023
- Waste (Plastic Bag) Regulation 2018
- Marine Pollution Prevention Act 2008

The waste management policy also has to be strategically aligned to the University's Corporate and Waste Management Plans, which will assist in giving the legislation University wide ownership, rather than it being only the implementing divisions. This is vital in assuring that every faculty and division of the University plays its role in the promotion, implementation and monitoring of the waste management policy. Perhaps the most challenging part of developing a waste management policy is its enforcement element. Enforcement is only ever practical when there are sanctions and penalties for non-compliance. As this will be new grounds for the University, it will surely be a debatable area within the policy. NUS needs to efficaciously execute a 'greening' university campus whereby waste management programmes should be prudently planned based on key emphasis and waste categorizations.

Importance of Stakeholder Participation for Sustainable Waste Management

For the NUS to fully engage sustainably in proper waste management practices, the University must collaborate with the relevant stakeholders. Joseph (2006) in his case study of India argues that waste management initiatives without the participation of the relevant stakeholders are inefficient and non-sustainable. Stakeholder involvement and participation is crucial as it gives the University creditability

in sustaining the implementation of its Interim Waste Management Plan and policies. For a small nation like Samoa that has limited resources, engagement with the stakeholders is the perfect way forward as it allows the University to access the existing resources. In the form of a partnership, the University and the stakeholders are in a stronger position to request and bid for resources from the government and donors. This also increases the efficiency of waste management as it widens the influence and coverage of the University's Interim Waste Management Plan and policies. Snel et al (1999) suggests that in order for stakeholder engagement and participation to occur, the approach and relationship between the institution and stakeholders must change from a traditional to a participative municipal centred as demonstrated by Olley (1996) in the below figure:

Figure 3: Stakeholder Relationship Approaches

Traditional Stakeholder Relationships vs. Participative Development
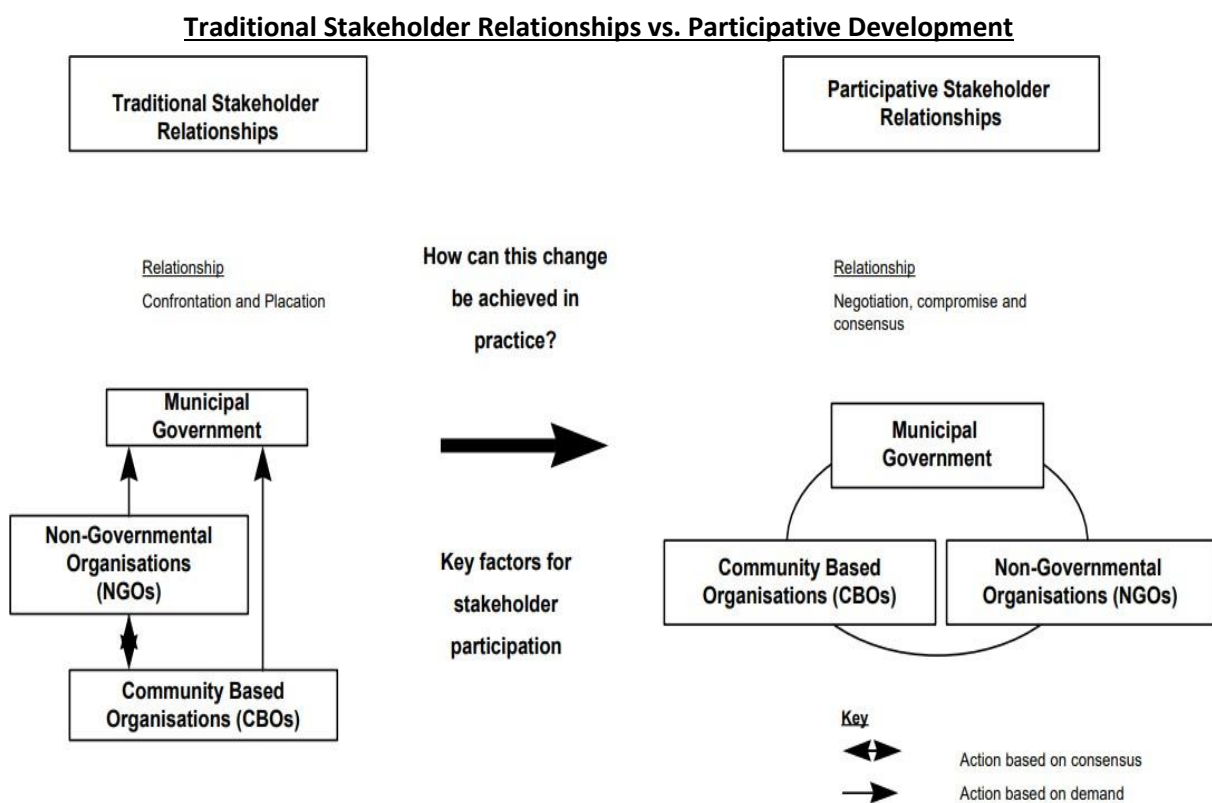
The NUS as a public institution must be inclusive in its approach and transition from the traditional to a participative stakeholder relationship. The NUS must realise that it has an advantage in its role as a teritiary education institution which can potenitally allow the University to use its existing programmes to enhance stakeholder participation for sustainable waste management. This approach has been trialled in Nigeria with Ikhuoso (2018) in his investigation of public secondary schools successfully utulising educational programmes to ehance stakeholder participation.

Samoa Recycling and Waste Management Association (SRWMA) Partnership
As accentuated in the previous chapter, central to the successful sustainment and marketing of segregated waste management practices at NUS is the University's partnership with SRWMA. The SRWMA was established on World Recycle Day March 18th 2017, and is made up of mainly private companies who are devoted to waste segregation and environmental health (SRWMA, 2020). The Association is funded through the annual membership subscriptions and the donor grants from successful project applications. Their vision is "Improving Waste Recycling and the Management of Commercial and Industrial Waste for a Healthier and Cleaner Samoa". The vision is complemented by

three (3) strategic goals: (1) Strengthen Waste Recycling in Samoa, (2) Improve the Management of Commercial and Industrial Waste and, (3) Implement Sustainable Waste Management Mechanisms and Approaches (SRWMA, 2018). What makes SRWMA different from similar societies and movements within Samoa is that its focal and founding members are the main and leading waste management companies within the country. These members handle most of the major waste streams for Samoa such as general, electronic, metal, plastic, glass and oil waste.

This is vital to the NUS as the University produces every type of waste due to its multidisciplinary programmes. These include electronic waste from computing programmes and general operations, metal, timber and oil waste from technical programmes, and lastly chemical and clinical waste from scientific and health programmes. This makes SRWMA the ideal partner for the University. However, the NUS should not halt at the successful implementation of its Interim Waste Management Plan as it only targets the internal operations of the University within its campuses. Through the Association, the NUS can potentially have a bigger impact in the private sector and the community. A formal strategic partnership between the NUS and SRWMA must be undertaken in the form of a Memorandum of Understanding in order to sustain a subsisted formal relationship between both parties.

Conclusion
Plastic Bottles and Aluminium Can Recycling Programme
The NUS through its Faculty of Business and Entrepreneurship (FoBE) and Governance, Policy and Planning (GPP) division are working collaboratively with SRWMA in the implementation of the Plastic Bottles and Aluminium Can Recycling Programme. This programme is funded by Coca-Cola and targets the Samoan village community. The programme has two components:

(1) Promotional and Awareness Marketing implemented by FoBE and GPP, and;
(2) Construction of Segregated Waste Bins implemented by the Australian Pacific Training Coalition and GPP.

Before the segregated cages are supplied to the community, it is important that a promotional campaign led by the FoBE Marketing students is conducted to stir awareness, appreciation and ownership within the village communities. This will be trailed first internally within the University using the existing NUS avenues as the first phase. This includes the FoBE Seminar Series, NUSTV, NUS Radio and the NUS Social Media outlets which will be used as platforms to promote proper customer waste segregated practices. As demonstrated in the below Marketing Module, marketing tools such as brochures, posters, banners, audio and video advertisements will be developed and distributed through the various channels. Targeted spaces for brochures and posters will be the Bookshop, Cafeteria, Gymnasium, Student Administration and Financial Services. The phase two of the promotional and awareness marketing component will see the project team utilise private and public avenues, such as radio and television stations and the press.

Figure 4: Marketing Module

The programmes strategy is to use marketing and policy as the main tools to address customer and behaviour attitudes towards waste segregated practices at the NUS. Once the cages are supplied, the project will be monitored and evaluated by the NUS and SRWMA teams. This data will generate a research paper on attitudes towards segregated waste management practices in the Samoan village community.

Accomplishing a sustainable waste management approach is a combined responsibility of the NUS and SRWMA. The main commendations of the scholarship are to raise students' (consumers) awareness through awareness campaigns that can bring about attitude and perception as well as behavioural changes towards waste disposal. Awareness campaigns about segregation of waste, its prominence and its welfares, is recommended for the NUS and environmental issues should be included in the awareness and campaigns to help consumers to better comprehend the relative between waste segregation and how consumer behaviour changes could resolve environment harms. Students' participation and involvement in campaigning and marketing and finding solutions for community environmental problems would bridge gaps between management and students and therefore they would readily uptake better waste management practices. Reinforcing environmental laws will benefit to deliberate on the importance of the environment.

Acknowledgement

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Service Quality and Customer Satisfaction: A study of Mobile Phone Services in Samoa

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Abstract

This research paper seeks to investigate the level of service quality and customer satisfaction based on customers' experiences and perceptions in the mobile telecom industry in Samoa. The methodology employed for this research was highly quantitative using random sampling of 116 customers in the city of Apia and in the town of Saleloga Savaii. The findings show that customer satisfaction is positive whilst service quality variables highlighted that the actual experience of the customer on all the criterion denoted positive experiences.
Keywords: *mobile services, service quality, customer satisfaction, Samoa*

Introduction

A number of countries in the past few decades have experienced dramatic changes in the prominence of services and the role that the service sector plays in their economies (Edwards and Croker, 2001; Nankervis and Pearson, 2002; Sharma, 2002). This change has been further boosted due to the technological advances in the mobile phone industry, and mobile phone users are now demanding for affordable and reliable services that meet specific individual needs, lifestyle and preferences (Sigala, 2002). Mobile phone industry is of no exception. The provider of service should be able to deliver quality services and maintain customer satisfaction in terms of demonstrated solid responses, fast download speed and at decent pricing of products/services (Cell Phone Providers Review, 2020). The fastest growing mobile service provider in the Pacific Island countries in terms of acquisition is Digicel Company. Since its launch in the Pacific in 2006, the company is in operation within six countries, Fiji, Papua New Guinea, Nauru, Vanuatu, Tonga and Samoa (www.digicelpacific.com). Given that there is lack of research on mobile sector in Samoa, this research seeks to investigate the level of service quality and customer satisfaction based on customers' experiences and perceptions in the mobile telecom industry in Samoa. This research provides a suggestion as to how the service provider targeted their marketing efforts and scarce economic resources in improving service provision, service quality and customer satisfaction. This research could inform policy making and operational service management. This study advances our understanding of the marketing strategies employed by mobile service provider such as Digicel and its effect on service quality and customer satisfaction.

Literature Review

Parasuman et al. (1985) cited in Huang et al. (2014) define service quality as the difference between the expected service prior to consumption and the perception of the customer after service consumption or the comprehensive judgement in relation to the superiority of a service relative to challenging offerings (Huang et al., 2014). In line with the above authors are Bitner and Hubbert (1994) cited in Jafarnejad and Shafie (2013) stating that it is the overall impression of the customer in relation to the organizations services inferiority or superiority. Service quality according to Zeithaml and Brittner (1996) is the delivery of superior service relative to the expectations of the customer (Jafarnejad and Shafie, 2013). Overall it seems like most authors have a common ground on their views of the phenomenon. Service quality is an evaluation or an assessment of the service provider by the customer in terms of their expectations of the service prior to consumption, and their perception after service consumption. Furthermore, attached to service quality are dimensions to measure and evaluate quality of service delivery. Parasuraman et al (1985) cited in Huang et al. (2014) offered ten measurement dimensions of service quality. These are tangibility, reliability, responsiveness, credibility, security, competence, courtesy, understanding, access, and communication (Huang et al.,

2014). Later on in Parasuraman et al. (1988) a modified SERVQUAL scale using the five major dimensions extracted from the previous ten were applied. Tangibility refers to the outer look of the service personnel and the hardware facilities of service. Reliability represents the right implementation of the promised service content. Responsiveness denotes the human resources intention to assist and help the customers in providing timely service. Assurance refers to the professional knowledge and skills of the service personnel and their ability to convey trust and confidence. The last one, empathy, refers to the individualised customer care that is provided by the service personnel for the customer (Jafarnejad and Shafie, 2013). The amendment to the SERVQUAL scale is seen as more significant in terms of reliability and validity and was presented as a method of quality measurement that can be applied to different service sectors.

Customer satisfaction on the other hand is the ability of the organization to delight the customer in terms of superior service delivery that is of high value to the end user. Customer satisfaction is critical to the success and sustainability of any business (Huang et al., 2014). Satisfied customers hardly switch which has the potential of increasing an organizations customer base and enhance the firm's reputation (Srivastava and Bhatnagar, 2013). Raising the level of customer satisfaction has a direct impact on the market share that leads to improved profits, positive word of mouth and it lowers marketing expenditure (Srivastava and Bhatnagar, 2013; Srivastava and Sharma, 2013). Cheng et al. (2011) argue that customer satisfaction must be prioritised over profit making. This is because satisfied customers will tend to re-purchase and bring in profit (Cheng et al., 2011). Customer satisfaction bridges the gap in an evaluation of the difference between prior expectations and the actual performance of a certain product or service. It is an appraisal of service attributes that triggers great level of overwhelming results. It also fulfils the necessity and desires of the customers' and has the probability of creating lasting relations (Oliver, 1999; Junaid-ul-Haq et al., 2013; Chang, 2006; Choi and Sheel, 2012). Deng et al. (2010) group satisfaction into 2 groups namely transaction specific i.e. satisfaction after a given service encounter and general satisfaction which arises as a result of an overall rating of the service or product in previous experiences.

Methodology
The collection of the data was done using a structured questionnaire which was administered in both islands of Upolu and Savaii in Samoa to the customers, who utilised the services of Digicel Samoa Limited. Random sampling of 116 customers in the city of Apia and in the town of Salelologa Savaii and mean values were used to compare the service quality and customer service levels as well as the percentage of the customers' satisfaction level.

Results and Discussion
Table 1.0 on page 4, represents the satisfaction level for each criterion. From the above table, most customers were satisfied with the service provision in terms of time taken for activation (62.1%) and reactivation due to non-payment of bills (20.7%). Even though most were satisfied, there were still customers with neutral response (6.9 & 12.1%) and those who were very dissatisfied (3.4 & 2.6%). For the billing related matters of the prepaid customers, a high number of customers which accounted for 40.7% were satisfied with the accuracy of charges. 25% had neutral response and those who were dissatisfied accounted for 13.9%, whilst 7.4% were very dissatisfied. On the other hand, post-paid customers on the same category were asked for their satisfaction in terms of timely delivery of bills, and more than half (66.7 %) of the respondents were satisfied. 12% of them were very satisfied which is good and a few were either, neutral (14.8%), dissatisfied (3.7%) or very dissatisfied (7.4%). It is also interesting to note that the percentage of very dissatisfied customers was higher than the percentage of dissatisfied ones. Majority (66.7%) were satisfied with the accuracy of the bills, and an equal distribution of percentage which is 7.4% of customers were very satisfied, dissatisfied and very dissatisfied, while 11.1% respondents were neutral. Satisfaction rate due to resolution process of billing complaints had come to an interesting finding as well, where an equal amount of customer's

percentage (40%) were split into neutral and satisfied while the 20% of customers are dissatisfied. 51.9% of the customers were satisfied with the clarity of the bills issued in relation to transparency and understanding, 14.8% were neutral in their responses while 7.4% were dissatisfied with 3.7% of customers who are very dissatisfied. Customer satisfaction level due to help service /customer care showed interesting findings compared to the previous sections. The ease of access to call centre showed that 35.8% were satisfied, 11.3% were very satisfied with almost the same percentage of 30.2% who were dissatisfied with 5.7% very dissatisfied. 17% of customers showed a neutral response. Almost the same rate of satisfaction was shown in the satisfaction level with the response time taken to answer call by customer care, whereas 39.6% were satisfied with 3.8% very satisfied. Customers who were dissatisfied accounted for 28.3% while 7.5% were very dissatisfied. 18.9% of customers were neutral in their response to this question. Satisfaction with the problem solving ability of customer care showed that 43.4% of customers were satisfied with 1.9% very satisfied compared to the 26.4% dissatisfied customers with 5.7% very dissatisfied. Neutral responses accounted for 22.6%. Customers who were satisfied with the time taken to resolve the complaint accounted for 35.8% with 7.5% were very satisfied. Dissatisfied customers accounted to 24.5% with 7.5% being very dissatisfied. Neutral responses accounted for 24.5% of the responses. Network performance criterion in terms of reliability and availability showed that 50.9% of customers were satisfied, 12.1% very satisfied with signal availability. Dissatisfied customers stood at 13.8%, with very dissatisfied at 6%. 17.2% showed a neutral response. Majority of the customers (59.5%) were satisfied, 12.9% very satisfied with the ability to make or receive calls easily while 2.6% were dissatisfied with 6% very dissatisfied. 19% of customers have had shown a neutral response to this question. Satisfaction due to voice quality when making calls showed that most people (54.3%) were satisfied compared to the dissatisfied customers (7.8%). Customer satisfaction with the availability of network signal showed that 47.4% were satisfied with 10.3% very satisfied. Customers with the neutral response accounted for 25%, and the customers who were dissatisfied were represented by 12.9% with 4.3% being very dissatisfied. Satisfaction with the restoration of network signal problems showed that 50.9% of customers were satisfied with 7.8% being very satisfied. Neutral responses stood at 27.6% while customers who were dissatisfied accounted to 10.3% with 3.4% being very dissatisfied. For the quality of supplementary/value added services, majority of the customers (50.8%) were satisfied while 35.6% showed a neutral response. 6.5% were dissatisfied with 3.4% being very dissatisfied. It was obvious from the findings in the study that the overall customer satisfaction for each criterion mentioned denoted a positive outcome for the mobile service provider in the Samoan community.

Table 1.0: Customer Satisfaction Level

CRITERIA:	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Missing Values	Mean	Std. Dev	Variance
SERVICE PROVISION:	%	%	%	%	%				
How satisfied with time taken for activation	3.4	10.3	6.9	62.1	17.2	87	3.79	0.978	0.956
How satisfied with time taken for reactivation due to non bill payment	2.6	6	12.1	20.7	6	62	4.79	1.466	2.148
BILLING RELATED-PREPAID CUSTOMER:									
How satisfied with accuracy of charges	7.4	13.9	25	40.7	12	8	3.33	1.144	1.308
BILLING RELATED-POST PAID CUSTOMER:									
How satisfied with the timely delivery of bills	7.4	3.7	14.8	66.7	7.4	89	3.63	0.967	0.934
How satisfied with accuracy of bills	7.4	7.4	11.1	66.7	7.4	89	3.59	1.010	1.020
How satisfied with the resolution process of billing complaints		20	40	40		111	3.20	0.837	0.700
How satisfied with the clarity of the bills issued in relation to transparency	3.7	7.4	14.8	51.9	18.5	90	3.63	1.214	1.473
HELP SERVICE/CUSTOMER CARE									
How satisfied with the ease of access of call centre	5.7	30.2	17	35.8	11.3	63	3.17	1.156	1.336
How satisfied with the response time taken to answer call by customer care	7.5	28.3	18.9	39.6	3.8	63	2.98	1.152	1.327
How satisfied with the problem solving ability of customer care	5.7	26.4	22.6	43.4	1.9	63	3.09	1.005	1.010
How satisfied with time taken to resolve the complain	7.5	24.5	24.5	35.8	7.5	63	3.11	1.103	1.218
NETWORK PERFORMANCE, RELIABILITY and AVAILABILITY									
How satisfied with signal availability	6	13.8	17.2	50.9	12.1	9	3.49	1.067	1.139
How satisfied with the ability to make or receive calls easily	6	2.6	19	59.5	12.9	0	3.71	0.942	0.887
How satisfied with the voice quality	1.7	7.8	25	54.3	11.2	0	3.66	0.845	0.715
MAINTAINABILITY:									
How satisfied with the availability of network (signal)	4.3	12.9	25	47.4	10.3	0	3.47	0.991	0.981
How satisfied with the restoration of network signal problems	3.4	10.3	27.6	50.9	7.8	0	3.49	0.909	0.826
How satisfied with the quality of supplementary/value added services	3.4	8.5	35.6	50.8	1.7	57	3.39	0.81	0.656

Table 2.0: Service Quality Dimensions – Perception Versus Expectation

	N	Mean	N	Mean
Reliability	116	26.3	116	21.4
Assurance	116	15.1	116	12.4
Empathy	116	15.3	116	12.1
Tangibles	116	19.9	116	15.7
Responsiveness	116	28.3	116	23.2

In terms of all the criterion of service quality as per table 2.0, ie: reliability of services, assurance, empathy, and tangibles it was noted that the actual experience of the customer on all the criterion was far above the expected mean level. The overall results showed that mean value for perception of service quality was 76.2 whilst the expectation from service quality was 61.31. This meant that overall service quality was positive.

Conclusion

Customers in the Samoan community perceive customer satisfaction and quality service in different ways. Digicel customers were mostly satisfied based on the results of the study, whilst on service quality as well. Advertisements, stability of the pricing, competency in service delivery, fast SMS, social bonding, personalised relationships timely response, quality of greetings, responding to customer queries were all the marketing strategies used which went a long way in ensuring better service provision which overall impacted positive experiences of the customer. This study has demonstrated that the manner in which the service operations and customer interaction is designed by a mobile service provider is the basis of strengthening customer relations which obviously then ties to the bottom line of the company. As a way forward, sampling can be extended to a larger number.

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Agile Governance in Practice: Stories of Agile Successes of the Government of Samoa

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Abstract

Globally nations have had to respond to the COVID-19 outbreak and Governments have been pressed on the need to be agile and adaptive. The Government of Samoa is a classic example of agile success predominantly in regards to the timing of its policy measures, the autonomy of resolutions and the steadiness amid transformation and stability. In this research paper, based on the secondary review of the Government of Samoa's responses, it is observed that it is reflective of the agility and adaptive governance and provides the real picture where agility is displayed mainly via the swiftness of Government's response to various agile successes mentioned in the paper as well as a result of the adaptability of the government as a response to COVID-19. This study therefore draws on the stories of agile successes of the Government of Samoa that its citizens should be proud of.

Keywords: Adaptive governance, agile governance, COVID-19, Government of Samoa, agile success

Introduction

The 21st Century has presented significant and increasing numbers of challenges to governance practices like never before. Governance practices and systems are under more stress in comparison to past years (OECD, 2001). Governance practices are now prone and subjected to increasing criticism and change. The role and system of governance is becoming ever more complex and sensitive to the circumstances in its surroundings (Hartzog, 2004). This is due to globalization and the enhancement of technology which have connected people and provided platforms to stimulate change. This has increased the need for governance practices and systems to be quick and adaptive to the changing and complex environment. The Government of Samoa has been prominently leading in its efforts to reevaluate governance in the context of the responses to the COVID-19 outbreak and has been challenged to achieve durable solutions in attaining its national goals. The Government has been the one under pressure to deliver enhanced services to their stakeholders and the COVID-19 pandemic has given rise to interactive models like "agile governance." The agile success stories of the Government showcase the capability of agile governance in responding to changing public needs in an efficient way. It is commonly known that customary models of government are weakening to the changing necessities and anticipations of citizens and it is quite astonishing that government agencies are habitually slow to adapt. However, with the Government of Samoa an agile culture has highhandedly facilitated agile success.

Agile Governance Literature Review

The terminology and concept of agile governance is better understood when the two words (agile, governance) are separated. According to the World Economic Forum (2018), governance refers 'to making decisions and exercising authority to guide the behaviour of individuals and organisations'. The forum goes on to describe that 'governance is achieved by the creation and enforcement of explicit rules, less explicit social norms, guidelines, policies or the creation of defined command structures' (World Economic Forum, 2018). The term agile is better defined and understood in the form of 'agility'. 'Agility implies an action or method of nimbleness, fluidity, flexibility' or adaptive (World Economic Forum, 2018). From defining the individual terms, the understanding of the concept 'agile governance' is better achieved. Agile governance is a system of authority that is quick and adaptable to sudden change in a positive manner. Governance systems that do react quickly but negatively to circumstance is not a demonstration of agile governance. Agile Governance is relativity

a new concept being captured and taken up in education and direct state government practice around the world (Novak, 2017). With the modern advancement and changes in technology, the governance and economies of the world are connected. With the increasing trade, travel and digital exchange, the economies and governance systems worldwide are dependent on one another. Although the international interdependence has more positive implication compared to the negative, it makes the economies and governance systems of the world more vulnerable. This has significantly increased the probability for sudden change in circumstances which will put governance systems under pressure to perform and make decision quickly. In many circumstances, this has led to the breakdown in communication which ultimately leads to bad decision making.

Governments and organisations from time to time fail in adapting to a sudden change in circumstances. This is mainly because traditional structures of governance are quite bureaucratic in nature (Novak, 2017). This makes the organisation predictable and slows its response. Traditional governance structures also, in most cases, have management staff with traditional leadership traits. Agile governances require flexible and different styles of leadership and management (Novak, 2017). This is a challenge to traditional governance structures as it contests the standing governance hierarchy. This is why adopting the agile governance methodology requires a significant change in organisation culture. Novak (2017) argues that this change in culture has to be driven from a bottom-up approach, from person to person. This argument is countered by Luna et al. (2013) who suggests in his study that agile governance has to be driven by management through avenues provided by information and communication technologies (ICT) and flexible modes. Figure 1 below defines the concept of agile governance:

Figure 5: Agile Governance Definition
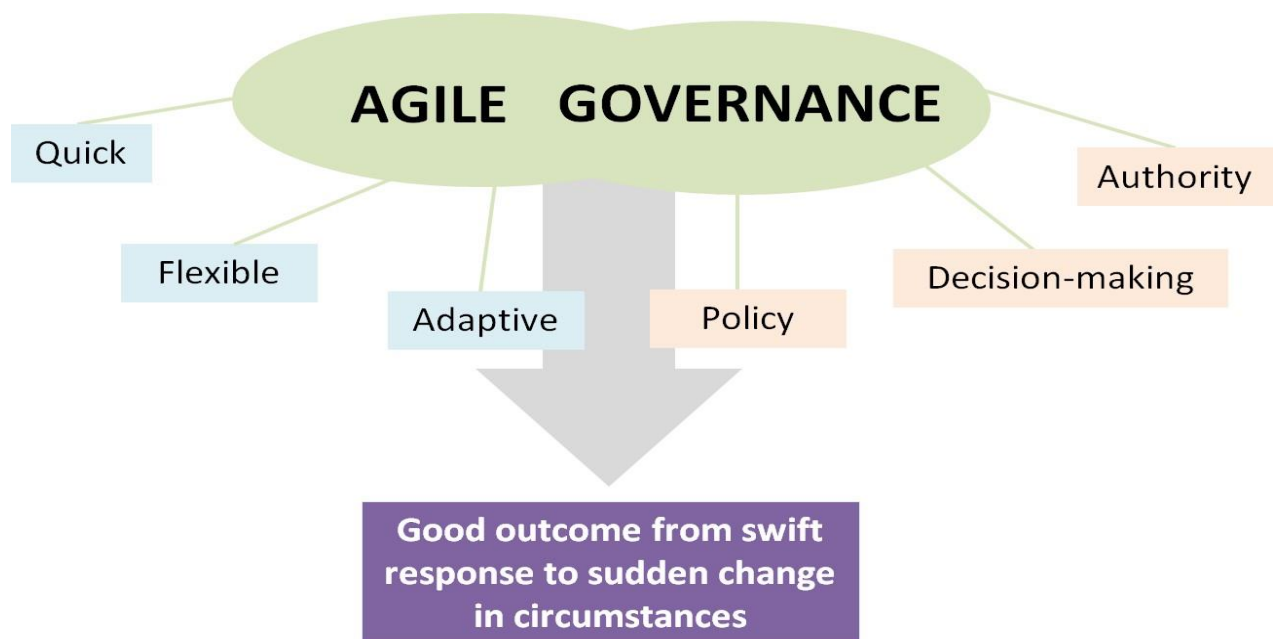
A major component of agile governance is the shift in ICT and digital infrastructure decreasing the need to physical travel and speeding up transactions and ultimately decision making (Lehto and Kristian, 2009). In Salem's (2016) case study of the city of Dubai, it demonstrates the fast transactions of information and decisions in a blink of an eye pace. The study suggests that as organisations and governments take on new technology, they will naturally shift through the digital transformation, as seen in many organisations today to eventually becoming agile governed (Salem, 2016). Thanks to digital transformation and the advancement of technology, there is an increasing movement of

government agencies adapting to the agile governance concept and methodology to increase security. State government and organisational governance structures that adapt to an agile environment have been proven to be more secure in comparison to their traditional governed counterparts (Rindell et al, 2016). This is because the agile governance concept and methodology allows the country or institution to respond relatively quickly to threats and avoiding catastrophic damage towards the confidence in leadership.

Samoa has been on the ends of both cases (traditional governance vs. agile governance response) in responding to sudden changes and threats. The 2019-2020 measles epidemic in Samoa that claimed the lives of 86 individuals, mainly children, tested the Government of Samoa. The Government of Samoa's response to the measles epidemic that raged through the country in late 2019 can be described as a traditional response. The Government of Samoa's slow response to the measles epidemic received criticism nationally and internationally (Mayron, 2020a). The Government of Samoa's slow response to the measles epidemic fits the traditional governance structural response as described by Novak (2017). It seems that the hierarchy and bureaucracy of the traditional governance model of the Government of Samoa prevented it from responding quickly and efficiently to the change in circumstances brought by the measles pandemic. The Government of Samoa measles epidemic failures brought about lessons, and provided the perfect grounds for a shift to the agile governance concept and methodology. According to Boodoosingh et al. (2020) the tragedy of the measles epidemic was key to the quick response of the Government of Samoa to the COVID-19 global pandemic. The Government of Samoa's response to the COVID-19 pandemic is praised in this paper as a reflection of agile governance. Although the response of the Government of Samoa is quick and timely, it is inevitable that it will receive some criticism (Mayron, 2020b).

Methodology

This study has undertaken an exploratory review of the secondary literature sourced from mainly journals and the Government of Samoa's Facebook page and various websites of its ministries. Primary data has not been collected.

Discussion: Stories of Agile Success of the Government of Samoa

Case 1

The first case of agile success is the case of the Samoa Information Technology Association (SITA) that reacted swiftly to assist the Government of Samoa and its people. SITA Team highlighted the Education sector as one of the fundamental areas that was being profoundly impacted by the lockdown. Similar to the internal response of the National University of Samoa, the team ventured onto developing an e-learning platform which was intended for the kids, to permit sustained learning while studying from their homes. The 24th of April 2020 marked an important milestone for SITA as it launched the e-learning platform which was piloted at Avele College. Other schools were also in the pipeline to be piloted when other digital preparations from their end were completed. This e-learning platform was established by the Association with no cost to the school. SITA also would be offering cloud hosting for 1 year to schools that are supposed to be coming on board (The Government of Samoa, 25th April 2020). Good agile governance and by sharing knowledge and through collaboration this e-learning platform was created and implemented.

Case 2

The second case of agile success is the Government of Samoa's inventiveness and essence of improvement and partnership in ensuring that the learning journey of students was not halted. The

Government of Samoa retorted to the COVID-19 pandemic using diverse technologies that included radio, TV, internet and blended learning modalities. Schools were also reopened with particular emphasis on observing to the guidelines from The United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF) and World Health Organization (WHO). The Government further sanctioned 18 million tala as special assistance to sustain education, including early childhood education and 10 million tala for teachers (Government of Samoa, 26th September 2020). As the Hon Prime Minister Tuilaepa Sailele Malielegaoi remarked and I quote: "education is an essential lever for an inclusive and sustainable recovery of all nations. Samoa will mobilise additional resources to build back more resilient, inclusive and gender-responsive education systems, with emphasis on measures to support the learning continuity of the most marginalised" (Government of Samoa, 26th September 2020). It is apparent that the Government has displayed agile leadership in its vision which paved the pathway for success. It was also evident that UNESCO's direction was the key in the mobilisation of the UN and regional organisations, the private sector, the civil society, media as well as academia to inaugurate the Global Education Coalition which is a multi-sectoral partnership aimed at supporting nations in mounting satisfactory education responses to COVID-19. The coalition support for Samoa comprises of a tripartite amongst UNESCO, Ministry of Education, Sport and Culture and Vodafone to deliver students free online access to educational resources, free data which was limited to curated online learning sites and hosting of teaching and learning resources to permit instantaneous access by students in big numbers. This Global Partnership for Education has not only reinforced in Samoa the distance learning prospects for students but also enhanced teachers' training and education resources production through regional engagements with the backing of the Moodle Foundation, Khan Academy and Lark (Government of Samoa, 26th September 2020). This agility has been fully unleashed as a result of the Government of Samoa being more open and engrossed via meaningful with potential partnerships and collaborations. As a member state of UNESCO, and through its leadership drive with the partners, issues of accessibility have been appropriately addressed. Government's agility on a national level has brought together the platform for open dialogue and partnership impacting service delivery to the students and teachers with its focus on the educational outcomes. The Government of Samoa has augmented agility by cultivating its engagement and partnership with its potential partners, particularly with regards to improving service delivery.

Case 3
The third case of the agile success pertains to the Government of Samoa's agility in up taking remote working and yet being able to deliver fast-paced and effective policy making. The Legislative Assembly of Samoa responded to the COVID-19 pandemic, and rose to the contest by swiftly acclimatizing the way it was conducting its business and moved part of its work online with support from the United Nations Development Programme (UNDP). The Legislative Assembly of Samoa has been amongst the very few advanced parliaments that had adopted processes and mechanisms to warrant online work methods using information and communication technologies (ICT's). This significant enterprise, which permitted remote working of Members of the Parliament and parliamentary staff as well as virtual parliamentary committee meetings, was supported by UNDP's Strengthening Legislatures in the Pacific Island Countries (SLIP) Project, funded by the Government of Japan. So, it is clearly evident that whilst many Parliaments in the Pacific have struggled, Samoa has taken the lead. Government of Samoa's shift to digital mode was a classic example of its adaptability and agility to ensure that the core principles of democracy are maintained and the smooth functioning of the country is established through its policy making in parliament (Government of Samoa, 21st April 2020; UNDP, 21st April 2020). The Resident Representative for the UNDP Samoa Office, Jorn Sorensen quoted that: "the role of Parliament in a time of crisis is more vital than ever to pass and review emergency laws, allocate and scrutinize the use of public resources as well as oversee government's action" (Government of Samoa, 21st

April 2020; UNDP, 21st April, 2020). Further, on behalf of the Legislative Assembly of Samoa, the Speaker of Parliament, Hon. Leaupepe Toleafoa Fa'afisi, communicated his appreciation and confirmed the crucial support this new equipment would accord to Members of the Parliament and their constituents. It was stated that: "it will enable our Parliamentary Committees to conduct meetings via teleconferencing and to receive online public submissions" and "furthermore, this initiative has enabled Parliamentarians to be better equipped in carrying out their duties and responsibilities in an advanced and professional way. It will also assist our Parliamentary Committees in engaging and collecting more feedback from outer districts and communities" (Hon. Leaupepe Toleafoa Fa'afisi quoted in Government of Samoa, 21st April 2020 and UNDP, 21st April 2020). Partnerships have afforded the Government of Samoa the leverage in modernization, without necessitating the investment itself. This partnership has given the Government the prospect of using established innovations and permitted it to leap-frog to new initiative.

Implications for Policy Makers
1. In any institution or Government institutional knowledge or corporate memory already exists. Government's also store research and knowledge about the future for explicit areas. Thus, knowledge sharing across Governments, NGOs, Private companies etc helps align tacit and explicit knowledge. These can be achieved through face to face platforms, print or virtual platforms. This helps in identifying models/frameworks that work or don't work and that can be replicated or contextualized to achieve outcomes.
2. Government's participatory and citizen oriented approaches helps tap into the "knowledge" which helps the Government ascertain the needs of the citizens via participatory planning, design and implementation. This is the stepping stone for agility and opens up new pathways for local and regional policy, strategy and change efforts.
3. Government's leadership, political will and drive, its strategic alignment, resource and capability enhancing efforts, and good governance helps in attaining authentic visions in lieu of the country's and region's needs and aspirations.
4. The capacity of the Government or of the local agencies (their organizational capacity) to adapt is also needed. The Government creates the bridge between anticipated outcomes and actualization. This is a big challenge, especially in Government's that are under resourced.

Conclusion
Agile governance is about deploying the quickest route to being about the best value to the citizens. During COVID-19 it is evident that the Government of Samoa applied an agile focus on governance in managing the programmes and overall service delivery. The Government through its leadership and swiftness, good governance, partnerships and collaborations, was able to scale up and down to adapt quickly to the issues as it arose due to the impact of the COVID-19 environment. The Government of Samoa is a classic example of successor reflecting its ability to prioritise programmes and service delivery outcomes based on strategic alignment, its thrust for technology and the advocacy and promotion of virtual culture, coupled with organizational capacity and Government capacity to adapt created the bridge amid the outcomes anticipated and the actual support to ideally achieve results.

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Challenges in Business Information Systems: General Policy and Marketing Implications for Cyber Security for Businesses in Developing Countries

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Abstract

In this digital era where businesses in developing countries are operating in a digital environment, cyber security for businesses is a sphere that is advancing extensively. To curtail the effects from cyber security, it is important that across the different businesses and countries a multi-faceted risk mitigation strategy be implemented. Therefore, this research seeks to fundamentally outline the significance of dealing with these issues effectively. This research identifies the information system and cyber security challenges for businesses in developing countries such as network security, data breach, and policy monitoring and suggests the general marketing and policy implications.

Keywords: *Business, Information Systems, Cyber security, Policy, Developing countries*

Introduction

Business information systems around the world are increasingly dependent on cyber space and utilising that space for digitally connecting with actors within and outside of the business corporation. This is increasingly evident in the South Pacific region with a high level of digital transitions and transformations occurring at the business level (Cave, 2012). However, the infrastructure used to connect and the actual engagement on the cyber platform poses additional cyber risks which are seen as an issue of executive security. This is why cybercrime is a budding concern for businesses in developing countries (Baur-Yazbeck, 2018). Developing countries are hugely reliant on consistent and secure cyberspace, however this does not equal with that of the developed countries. Due to this heavy reliance, there are inherent susceptibilities and prospects which place their critical organisations susceptible to cyber exploitation (Zareen, Monis, Muhammad and Khalid, 2013). As a result, cyber security has become a global phenomenon (Das, Saju, and Gupta, 2020). Various Governments and businesses are instituting measures in order to avert these cybercrimes. Despite numerous measures, cyber security is still a very big concern for many businesses and developing countries alike (Chang and Coppel, 2020). This is because cyber security extortions and threats are an ever-increasing risk with more businesses falling as victims to cybercrime (Jbair, 2020). These threats have escalated cybercrime which is an extravagant form of crime in the real world today (Kayser, Ellen and Cadigan, 2019-20). The snowballing threats against businesses and critical infrastructure continue to heighten the need to advance the defence and resilience of organisations (Harry, 2020). Data analytics in this regard for network intrusion detection is pertinent (Lidong and Randy, 2020). It is also imperative to train employees not only to recognise cyber threats but also to communicate back what seems doubtful (Dudley, 2020). The dire need for prompt notification by attentive users can permit businesses to respond to threats quicker, reducing dwelling time and shielding networks. One of the significant lessons emanating from the scholarly work of Chang and Coppel (2020) has elucidated that it is vital to comprehend internet access and usage to be able to identify the level of threat. Scholars have stressed on the importance of cyber security education as well (Chang and Coppel, 2020; Kortjan and Solms, 2013; Kumar, 2020). Bharara (2013) and Lee (2013) stress on the need for protecting cyber citizens and improving cyber security. Thus, this necessitates development of cyber security policies and in this regard, developing countries are in the process of crafting their own cyber security policies and agendas, and these developing nations heavily depend on the lessons learnt from their developed country counterparts (Ellefsen, 2014). Thus, the next part of this paper discusses the Information System and Cyber Security Challenges for Businesses in Developing Countries.

Information System and Cyber Security Challenges for Businesses in Developing Countries

Information system and cyber security challenges vary across different businesses and countries. Although cyber security is a growing worldwide problem, it seems to place more stress on developing businesses and countries. Vazzana (2019) suggests that addressing gaps in information systems and cyber security should no longer be a major first world problem. Adhikari (2016) identifies the below list of cyber security obstacles faced by developing and least developed countries:

- Lack of cyber security strategies/policies and legal and regulatory framework
- Inadequate fund allocation to cyber security ecosystems
- Lack of information security awareness and persistent information security culture
- Inadequate standards and maturity models for cyber security
- Lack of a Child Online Protection Framework
- Lack of necessary knowledge, information security professionals and skills within government body
- Lack of specific sector policies, e.g., education
- Resistance to change, especially in the public sector
- Reliance on imported hardware and software
- Lack of sector-specific research and development (R&D) programs/projects, especially in education
- Lack of appropriate national and global organisational structure to deal with cyber incidents

From the above list, this research identifies three main challenges for businesses in developing countries.

Information system and cyber security challenges are more significant for developing countries such as Samoa. This is quite obvious for reasons linked to resource constraints. Information and Communication Technology (ICT) infrastructure in particular makes all the difference in the strength and sustainability of information systems and cyber security for developing countries. The ICT infrastructures of businesses depend on the ICT infrastructure of the state or nation they are based in (Tagert, 2010). This is a major challenge because businesses based in developing countries are limited to the ICT infrastructure of the country. This means that the cyber security infrastructure for a business or corporation based in Samoa can only be as good as the cyber security infrastructure of Samoa (MCIT, 2016). This does not necessarily mean that information systems and cyber security is a dead-end. The infrastructure only limits the physical architecture and bandwidth available to the business. Electronic components such as software's and other mitigating measures like limiting access to various sites and policy enforcement are reasonable alternatives around the limited infrastructure (Muller, 2015). This alternative has been proven to be effective with several cases of accounting businesses successfully combating cybercrime (Goodin, 2002).

The second major challenge in information systems and cyber security in developing countries is education. This is both in terms of formal education and general awareness. Developing countries often have gaps in the basic computing education in the primary and secondary levels. Basic computing knowledge such as knowing how to identify spam, malware and suspicious sites and mail seem to be absent (Muller, 2015). Basic skills on how to identify the difference between legitimate and non-legitimate sources are also lacking. Students' not knowing how to identify potential security risks and basic fact from fiction on the internet is a problem that has growing consequences worldwide. Addressing these education gaps at tertiary level is far too late a step as it does not capture the students that do not continue to tertiary level or drop out at secondary level. These gaps in the education system ultimately affect the business community. Outside of formal education, general awareness is also a challenge when faced with resistance (Muller, 2015). This is predominately within

businesses and corporations that have an aging workforce not flexible to new technologies and change (Adhikari, 2016).

The third and final challenge for information systems and cyber security is the national policy and legislation. Nationally within Samoa, this is being addressed through the 'Samoa National Cyber Security Strategy 2016-2021' which targets the strengthening of national cyber security networks through its five (5) goals and strategies: (1) Develop necessary organisational structures with a focus on utilising existing structures in Samoa as well as in the region; (2) Establish relevant Technical Measure (Entities and Standards) to eliminate Cyber Threats and Attacks, Enhance cyber security and promote cyber security; and (3) Strengthen the legal framework to meet highest regional and international standards with regard to protection of fundamental rights as well as criminalization, investigation, electronic evidence and international cooperation; (4) Build digital citizens capacity, Raising awareness and attaining resources to enhance cyber security, Combat Cybercrime activities and promote Cyber safety to the highest levels; and lastly (5) Cooperation; Responding to the global nature of cyber security threats and attacks through a multi-stakeholders approach and strengthening local and global partnerships (MCIT, 2016). The five (5) goals and the strategies identified in the Samoa National Cyber Security Strategy 2016-2021 pinpoint and address the challenges listed by Adhikari (2016). Strategically Samoa is heading in the right direction in terms of policy although efforts must be prepared to make sure that it is reflected at institutional levels of businesses. Legislation challenges in developing countries in the South Pacific are becoming more evident with a growing number of businesses falling victims to cybercrime (Finau et al, 2013). Figure 1 below demonstrates the challenges and the relationship between the national and business information systems and cyber security levels:

Figure 6: Cyber Security Challenges
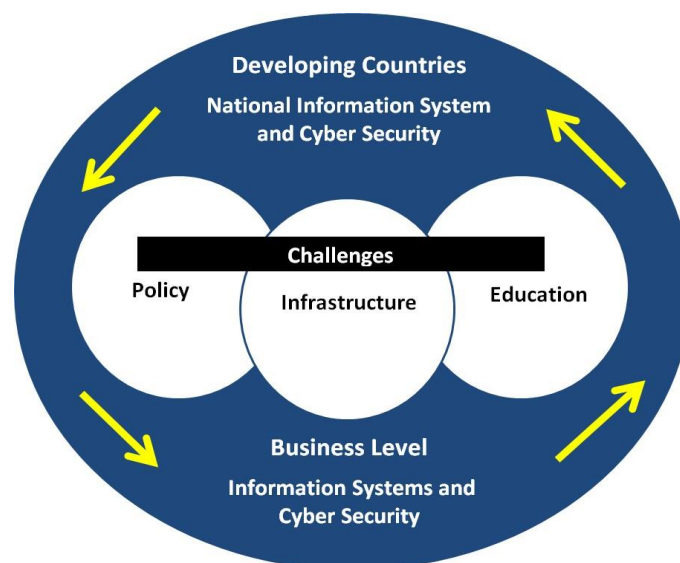
Methodology
This research has undertaken a secondary based approach. Primary data has not been collected.

General Policy and Marketing Implications for Businesses in Developing Countries
In terms of general policy for businesses in developing countries, the following recommendations are made:

1. Businesses to deploy a proper cyber security risk assessment which is prominent. Risk management is not an easy task and finding efficacious mitigating measures is not as straightforward as it seems. Given that cyber threats keeps escalating together with the sophistication of the threats, standard risk analysis methodologies can help to score the cyber risk and to place it in the risk tolerance matrix. The below cyber security risk tolerance matrix identifies four (4) levels of information system and cyber security threats:

Figure 7: Business Information System Cyber Security Matrix

INTERNAL MALICIOUS:
Deliberate acts of sabotage, theft or other malfeasance committed by employees and other insiders
For example, a disgruntled employee deleting key information before they leave the organization (RSA, 2016).

INTERNAL UNINTENTIONAL:
Acts leading to damage or loss stemming from human error committed by employees and other Insiders
For example a business experiences internal technology issues that caused backup systems to fail (RSA, 2016).

EXTERNAL MALICIOUS:
The most publicized cyber risk; pre-meditated attacks from outside parties, including criminal syndicates, hacktivists and nation states (RSA, 2016).

EXTERNAL UNINTENTIONAL:
Similar to the internal unintentional, these cause loss or damage to business, but are not deliberate (RSA, 2016).

2. The general identification of threats in the above matrix will allow the businesses to figure out tolerable outrage for critical processes and if extra measures are needed. Cyber risk is also evaluated to classify threats to precedence systems and assets that are elected because it is too expensive to shield everything equally. If business ICT professionals align better and work together with management, then redundancies can be eradicated and the business data can be protected.

3. Governance is also an imperative theme in cyber security, as it pronounces the policies and processes which regulate how the business identifies, averts, and retorts to cyber incidents. Thus, implementing the right mix of people, policy, architecture, training and technology can enable the business to be more secure. As part of the information security governance and risk management, explicitly identifying the information assets and the advance, certification, execution and apprising of policies, standards, procedures and guidelines to achieve confidentiality, integrity and availability is critical. Information security governance should ensure that the business has the precise information structure, direction, and leadership. By this, governance implies that the proper administrative controls to mitigate risk are intact. This includes regular information system

risk analysis which benefits by providing secure governance that in turn permits proper administration of records.

Governance structures of businesses are vital as it determines who sits on the table in terms of managing cyber risks. Governance in response to business information systems and cyber security must have a good balance between business managerial and technical expertise. The below figure attempts to be a starting point to demonstrated this balance in the information system governance of business organisations:

Figure 8: Business Information Security Governance

Each group identified above needs to be part of the risk management conservation. It is significant that the groups understand how each individual influences and impacts the business information system and cyber security position (RSA, 2016). This creates a better team environment within the business organisation.

2. Network security is very significant part of policy to securing the business computer network from intruders, as well as keeping software and devices free of threats. This requires businesses to practice access control, and regularly procure antivirus software, anti-malware software, application security, data analytics, behavioral analytics, data loss prevention, email security, firewalls, and distributed denial of service prevention as measures to prevent threats.

3. Management policy for the different types of businesses pertaining to assurance to data and information security is critical as well. For this, in most businesses, user activity profiles are generated for anomaly detection. This includes gathering data attribution, and context information such as user location which is pertinent for tracking. It is commonly assumed that much of this information is privacy sensitive and security breaches or data mismanagements

by administrators may lead to confidentiality breaches. Also users may not feel contented with their personal data being collected for security purposes. Thus, it would seem that security and privacy are conflicting requirements. This means that approaches to reconciling data security and privacy need to be looked into.

4. Data breach reporting and management strategies coupled with reviewing the ICT policy of businesses is another constituent that requires due consideration. It is important to also create awareness and advocacy and promote cyber security training and development. In many businesses, cyber security awareness takes the back seat. It is prudent to have more advocacy, and the need for stressing culture and behaviour change for dealing with cyber threats is critical.

5. Policy monitoring, evaluation and accountability are also vital for businesses to be able to evaluate the effectiveness of policies.

Marketing also predominantly takes precedence in cyber security matters for businesses and therefore advocacy and cyber security champions as well as creating cyber security awareness is pertinent. The following recommendations are made:

1. Businesses must create educational e-content which could be in the form of blogs, downloadable materials, webinars, video tutorials or businesses could prepare flyers and brochures to hand out to users. Businesses could also use local radio and talk back shows, TV and social media outlets to pursue the targeted audiences.

2. Advocacy could also relate to notifying the in-house staff as well as public about cyber security threats and the measures instituted by businesses.

3. Businesses could actively be engaged at their industry events or forums leading and participating in it to promote the business and share best practices in cyber security measures.

4. Encouraging training of the workforce to better comprehend cyber security threats and crimes is also essential. Marketing the training programmes is another important aspect.

5. Businesses also need to forge strategic partnerships with government agencies, ministries and policy-makers to design cyber security frameworks and policies as well as to identify threats to external networks. Targeting the audience would be an important part of marketing.

6. Businesses can also act as a close hub to furthering research and proposing solutions with think tank agencies on critical issues. Again, this information can be marketed via social media, blogs, presentations and workshops.

7. Business collaboration should be extended to NGO's, private sector and scientific organisations and donor agencies to build funding opportunities, enhance capacity building and promote shared practices.

8. Businesses as part of their marketing strategy also need to ascertain the feedback of their stakeholders and publicize successes and failures.

9. Businesses ought to document demonstrator projects or developments. For successful models, replication and scaling-up would be far easier. Such enterprises can be resource intensive as well.

Conclusion

In this contemporary era of technology, the pace at which the internet is being used as well as the predominant role of the internet globally has exposed businesses in developing countries to the cyber world where cyber criminals are accessing data and information rapidly. Cybercrime is no doubt an illegitimate act and a threat that warrants proper security to be embarked upon determinedly and meritoriously. There is a need to create more cognizance among the businesses and fundamentally the end users about internet and about the cyber space/internet of things, the varied forms of cybercrime and of course some precautionary measures as they use the internet. Security currently is becoming a protruding and foremost concern. In this paper, some security issues have been introduced. It is hoped that through proper policy and marketing drive, cyber threats would be affluently managed by businesses.

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Digital Literacy for the 21st Century: Policy Implications for Higher Education

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Abstract

This paper discourses on digital literacy as a development tool for the 21st century in Higher education for both educators and learners. This is seen as a key requirement for Higher Education Institutions. It presents the challenges and policy implications for the Higher education. It stresses that being digitally literate is critical to functioning in a digitally connected environment.

Keywords: *Digital Literacy, Digital Inclusion, ICT, Policy, Higher Education, Learners, Educators*

Introduction

Given the rapid revolution of Information and Communication Technologies (ICT's) and the progress of the digital landscape, new prospects for exchange and cooperation has opened up. In lieu of this trend, pacing up to sustain the learning needs of the new generation of digital natives is vital for educators (Jarque et al., 2017). Some of the educators tag themselves as digital immigrants as opposed to digital natives (Cindy, 2018). The same can be said for learners as well. In contemporary times, the traditional assessments of literacy have been transformed as a result of digital technologies which has largely come about as a result of the socio-cultural processes (Olson and Cole, 2006). Studies demonstrate that technology plays an essential role in culture (Wiegel et al., 2009; Davies et al., 2009). This is why digital inclusion in Higher education has been inclined to be understood from the perspective of accessibility (Seale, Draffan and Wald, 2010). Finn (2004) argued that with the mandate of "No Child Left Behind", there is an augmented urgency correlated to technical skills or digital literacy. According to Finn, "it will become increasingly necessary to be digitally literate to function in a digital, internet-connected economy" (Finn, 2004, para 3). Here it is designated that digital competence is reinforced by digital literacy (Martin and Grudziecki, 2006). Digital Literacy is defined as the:

> "*Awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process*" (Martin and Grudziecki, 2006, p. 255).

The European Commission (2010) published a Digital Competence Framework based on five (5) areas and twenty-one (21) competences, which comprise the notion of digital literacy (Ferrari, 2013). In 2008 UNESCO launched the policy document ICT competency standard for educators with focus on teacher education and digital literacy (UNESCO, 2008). Kuhn (2017, pp. 12–13) states that both policy and research delineates digital literacy: "The Horizon Report contends that finding effective ways to teach these skills is not a simple task (...) "Because digital literacy is less about tools and more about thinking, skills and standards based on tools and platforms have proven to be somewhat ephemeral". (ibid. p. 24). Other studies (Haythornthwaite, 2007; Radovanović et al., 2015) deliberate on new literacy requirements as comprising competencies in finding, processing, creating, and collaborating information as well as articulacy in online technologies, communication norms, application, and programming environments. Additional studies focus on the abilities, or skills, essential to progress to be able to use ICT tools (Parvathamma and Pattar, 2013). Digital Literacy is preferably one of the supreme and substantial parts of information society as it is highly dependent on digital resources. Thus, as one of the core necessities of the workplace and industries, digital literacy is progressively being assimilated in higher education prospectuses (Miranda, Isaias and Pifano, 2018). Other scholars allude that in order to exchange this environment effectively, learners ought to be digitally

literate (Davies and Merchant, 2009; Eshet-Alkalai, 2004; Hobbs, 2011; Wiegel, James and Gardner, 1995). Digital literacy is seen as a "survival skill in the digital era" (Eshet-Alkalai, 2004). Remarkably, enquiries advocate that although there are common users of technology tools, learners classically lack information literacy skills and their critical thinking skills are often mediocre (Oblinger and Oblinger, 2005). Modern day learners may be "digital natives" (Prensky, 2007), but they do not inevitably comprehend how their use of technologies affects their learning (Oblinger and Oblinger, 2005). Educators should seek to tactically embed collaborative digital learning objects in their courses to strengthen classroom-based learning and sustain specific skill improvement. Probable learning disruptions must be curtailed by ensuing best practice guidelines to confirm ease of access, a unified user experience, and well-timed feedback, as well as providing suitable provision for fast resolution of technical anomalies. From a broader standpoint, the imperative of digital literacy progress in higher education is apparent through the strategic priorities articulated by the highest levels of governance, both nationally and internationally (McGuinness and Fulton, 2019; Miranda, Isaias and Pifano, 2018; Law et al., 2018). A digitally literate national will be able to absorb and take accountability for their learning so these upshots to a higher demand for education (Mashhadia and Kargozarib, 2011). Thus, the focus of the paper that digital literacy is an important element of policy for the 21st century.

Literature Review: Challenges

Just as digital literacy is imperative for learners, so is it correspondingly significant for educators. Scholarships highlight the necessity of specialized training in digitalising content for teaching, extensive didactic support and reconnoitring teaching and learning contexts to draw demonstrative successful examples (Lisbeth, Hellström and Stigmar, 2019). Sadaf and Gezer (2020) recent study highlights positive attitude, perceived usefulness, and self-efficacy to be the strongest indicators of educators' intentions to assimilate digital literacy into their classroom practices. This study further highlights that educators recognize the welfares of digital literacy for cultivating students' 21st century skills and preparing them for specialized careers (Sadaf and Gezer, 2020). Lei (2009) study suggests that educators are savvy with basic technologies and social-communication technologies, nonetheless, their technology ability is constrained by both the narrow scope and the absence of depth of their technology activities. The Coalition for Digital Intelligence (CDI), is a well-known platform created in association with the World Economic Forum (WEF) and formed conjointly by the Organization for Economic Co-operation and Development (OECD), IEEE Standards Association (IEEE), and DQ Institute, launched the DQ Global Standards Report 2019 which is the world's foremost endeavour to delineate a global standard for digital literacy, skills and readiness across the education and technology sectors (DQ Institute, 2019). The OECD, the WEF, the World Bank, and the United Nations have all identified these digital competencies as important for future readiness (OECD, 2018, WEF, 2018; WB, 2019; UN, 2018). Spires et al. (2017) study stresses on the implications of digital literacy for the 21st century. The progress of digital literacies has been stipulated by Alexander et al. (2017) as irregular. The author critiques that although higher education institutions aim for digital literacies education to embrace the 2020 skills acknowledged by the World Economic Forum, or to address similar sets of desired competencies, execution efforts remain unequal throughout the world and within communities (Alexander et al., 2017). Bali (2017) further reflects that there are three (interconnecting) ways in which disparities shape digital literacy. The first relates to access to digital tools and the functional skills to practice; second is in how the external milieu can support or hamper the competence to practice the digital literacies cultured and third is the extent to which specific literacies are imperative for certain populations. The author further resonates that there are also ways in which digital literacies can be trained to have an equity emphasis, for instance, integrating and creating enhanced access to people with disabilities, or using substitutes for varying levels of internet connectivity. The author deliberated that the role of higher education and of educators, is to work on cultivating digital literacies across the syllabus, taking into consideration the disparities of access to advance digital literacies in higher education (Bali, 2017). Bailey and Calonge (2017) thus, reiterate

that pedagogy should consequently be informed by this societal shift and necessities to retort accordingly.

Methodology
This study has undertaken an exploratory review of the secondary literature sourced from mainly journals. Primary data has not been collected.

Discussion
To endorse digital transformation, equal prominence should be merited for digital literacy skills development and infrastructure development in higher education. Setting up an appropriate symposium on digital literacy would strengthen digital literacy coupled with digital literacy training that ought to be customised for learners as well as for educators. There should also be a standard way of measuring digital literacy which should inform the data collection/analytics at the institutional level. It is prudent to assess digital divide and inequalities and respond efficiently through digital inclusion policies. Higher education institutions could form partnerships with mobile and tech companies to leverage ICT's as well as provide free and discounted devices. Government also has an important responsibility which is to create a meaningful environment of digital equality, thus Governments could provide education and training programmes for parents, educators and learners, and this element of digital literacy should also be fully integrated in the curricula. Governments through their policies could also subsidise internet access and charges and prioritise infrastructure projects and development. Higher education institutions should also set the impetus for research on digital literacy spanning the teaching and learning and research spectrum. Public-private partnership (PPP) models and frameworks can also be sought as an active means to deliver extensive digital access, ensuring that legal frameworks are existent in the backdrop.

Policy Implications and Way Forward for Higher Education Institutions
The following are the key implications in the context of Higher education:
1. Invest in infrastructure development
2. Invest in digital literacy skills development for both educators and learners
3. Set up symposiums and workshops to enhance capacity building and training in-house and externally by focusing on customised packages
4. Collect data on the learning analytics
5. Set up digital inclusion policies and assess digital gaps
6. Leverage partnerships to enable discounted service delivery
7. Government initiatives ought to be tailored at digital literacy and should set the foundation from schools
8. Government to consider the option of subsidizing the internet and prioritise infrastructure development
9. HEIs to build research capacity
10. Explore more PPP models
11. There should be monitoring, assessment and further development of digital literacy
12. There should be a Hub that serves as a "think-tank", supporting the progress of policy and practice, and monitoring the development of digital education, including the implementation of any new Digital Education Action Plans paving the way forward.

Conclusion
The prioritization of digital literacy in higher education is highly dependent on the Government and institutions of higher education. While prominence is given to the philosophy of digital literacy, the growing role of technology in teaching and learning, brings with it enormous challenges, however at the heart of it all is being agile and adaptive. The prominence of instinctively acclimatizing to new

digital environments and nurturing behaviours that encourage lifelong learning and the continuous mastery of new skills and knowledge is also at the core of the success of digital literacy.

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Peer Mentoring in the Faculty of Business and Entrepreneurship (FoBE): Challenges and the Way Forward for the Faculty at the National University of Samoa (NUS)

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Abstract

This study discusses the significance of peer mentoring programmes in the context of Higher education and postulates the benefits and challenges. It discourses on the challenges faced by the FoBE peer mentors and maps out the way forward for the Faculty.
Keywords: Peer Mentoring, Higher Education, Challenges, Faculty of Business and Entrepreneurship, the National University of Samoa

Introduction

The context of Higher education (HE) has changed drastically over the past three decades since the inception of the formal mentoring initiatives in HE (Darwin and Palmer, 2009). Higher education institutions (HEIs) are progressively identifying the significance in terms of professional and organizational development (Hakro and Mathew, 2020; Johnson, 2007; Mladenovic, 2012). Other benefits discoursed include, prospects for augmented exposure to philosophies and a primer to persons who can be supportive to the mentee (Penner, 2001), fostering a professional rapport that supports individuals to obtain skills desired to remain pertinent and competitive in the HE academic environment (Dean, 2009), and to support learners' socioemotional and personal growth and/or professional growth (Fedynich *et al.,* 2016; Gill *et al.,* 2012; Higgins, 2000; Higgins and Kram, 2001). Scholarships mention student transition and retention, enhanced sense of belongingness (Terrion, Philion and Leonard, 2007), and inter-cultural friendships (Devereux, 2004), augmented communication and organizational skills (Calder, 2004; Glaser, Hall and Halperin, 2006), higher levels of achievement (Shrestha et al., 2009), improved self-awareness and self-confidence (Heirdsfield et al., 2008), positive methodologies to learning (Dearlove et al., 2007; Fox et al., 2010) and benefits to the institution, coordinating staff and students (Elliott, Beltman and Lynch, 2011). Mentoring is a bi-directional, multidimensional, profoundly delicate and extremely customized process where mentors recognize their mentees' preceding experiences, fortes, flaws, ambitions, principles and professional goals (Montgomery, 2017). Mentoring exposes both the mentor and the mentee to multifaceted and dynamic interpersonal and behavioral patterns that necessitates open communication methods and approachability, focusing on mutual goals and challenges, driven by desire and stimulation, founded on a kind personal affiliation, and built on mutual respect and trust, allowing discussion of knowledge, and permitting impartiality, partnership and role modelling (Eller *et al.*, 2014; Lucey and White, 2017). The essential thrusts of mentoring relationships thrive on the mentor's understanding of mentoring (Irby, 2013). It also premises on feedback which efficaciously drives the mentoring relationship (Allen et al., 2010).

The literature advocates that within HEIs, peer mentoring is constructed upon egalitarianism in power distribution. The advantage accrued is that via reflection, mentors are able to contest mentees' viewpoints and deal with complications and trials as they rise. Therefore, through awareness-raising mentors empower mentees to develop the structural context of academia (Cropper, 2000). University-wide peer mentoring programmes offer manifold affirmative outcomes for the mentors, and potentially for HEIs managing and supporting the programmes (Beltman and Schaeben, 2012). Studies have recurrently enthralled on the concerns of mentees slightly more than for the mentors, prominently leading to discreetly less appreciation of the mentors' experiences (Haggard et al., 2011),

including outcomes for university student mentors (Hughes, Boyd, and Dykstra, 2010). Thus, the need for research. The next section of the paper presents the background on FoBE's peer mentoring.

Background: Overview of the FoBE Peer Mentoring in the National University of Samoa

The National University of Samoa was established via an Act of Parliament in 1984. It is governed by the NUS Act (2006) and NUS Amendment Act (2010). The University is also subject to the requirements of the Public Finance Management Act (2002) and Public Bodies Act 2001. The NUS is also actively involved and engaged through its commitment to the Government's Strategy for the Development of Samoa (SDS) 2017-2020 via its training, research and consultancy.   The Education Sector Plan (ESP) also provides the framework for NUS. The Ministry of Education, Sports and Culture (MESC), the National University of Samoa and Samoa Qualifications Authority (SQA) are the implementing agencies of the education sector objectives (Groves, 2019; Strategic Plan, 2017/18-2020/21). The University's teaching and research mandates are delivered through six faculties namely: The Faculty of Science, Faculty of Arts, Faculty of Business and Entrepreneurship, Faculty of Education, Faculty of Health Science, Faculty of Technical Education and three centres namely: Centre for Samoan Studies, Oloamanu Centre for Professional Development and Continuing Education and the Centre of Excellence in Information Technology plus the School of Maritime and Training (NUS, 2020). The Faculty of Business and Entrepreneurship's peer mentoring programme journey began in 2016 as this was when they joined with the Faculty of Arts at the NUS. The aim of the programme was to support learners' to be successful scholastically, socially and personally. The welfares attested include: guidance and support particularly for freshmen students, opportunities to network and build relations as well as equipping students with skills and resources via series of workshops. Given the COVID-19 pandemic, peer mentoring has received more prominence, given the disruptions instigated as a consequence of the pandemic on students' lives and on their learning. Presently, FoBE has seven peer mentors. These mentors are primarily second and third year students who work with mentees that is; the freshmen students (ie: first year). Peer mentors have been serving as co-facilitators, working in partnership with the Faculty and staff and have served as the main guide for students in their learning journey. This study seeks to discourse the mentors' experiences of the challenges in peer mentoring in the FoBE at the NUS.

Literature Review: Challenges

Some of the key issues identified in the literature on the challenges facing peer mentoring are premised on the deficiency of resources (both financial and human resources) within the HEIs, poor time-management (amid mentors and mentees); premature departure from the arrangement devoid of its full benefits being realized as well as the failure of the mentoring relationship (Colvin and Ashman, 2010; Cropper, 2000). Feldman et al. (2013) stresses that that poor time management on the part of the mentee and mentor were the foremost characteristics of unsuccessful mentoring programmes. Alternatively, the mentoring relationship is also impacted by the academic forte of the mentor and the trust and confidence that the mentees have on their mentors (Fox and Stephenson, 2006). The muddling frontiers of academic counselling, career counselling and emotional support also may cloud the mentor's ability to guide the mentee (Anderson and Shore, 2008). The relationship amid the mentor and mentee is also complicated by expertise, experience, and power (Smith, 2007), whilst peer mentors are encountered with disputes of power and resistance, the significance of careful planning and adjustment which is desirable afore adding peer mentors into courses (Smith, 2008) cannot be undervalued. The relationship is also impacted by the mentor's skills (Dearlove et al., 2007; Husband and Jacobs, 2009; Terrion and Leonard, 2007). The frustration of the mentees may also be doubled if the mentor flops to meet their anticipations. Thus, the implications for mentor recruitment and selection becomes noteworthy (Terrion and Leonard, 2007). Implications for mutual deliberations amid the mentor and mentee also significantly impact the attainment of peer mentoring goals (Dearlove et al., 2007). Scholars have also discoursed the implications pertaining to virtual

deliberations amid the mentors and mentees where the human interface is absent which makes mentoring perplexing (Smailes and Gannon-Leary, 2011).

Methodology
This study has undertaken an exploratory review of the secondary literature sourced from mainly journals and is premised on the FoBE peer mentoring workshop by Naz (2020).

Discussion and Implications
First of all, in the workshop, the seven FoBE mentors' identified resource constraints as the foremost challenge. These were mainly concerning stationeries, laptops, access to printers for mentors' as well as having an allocated space which serves as a "walk-in" session for the mentees. Thus, to resolve this issue, FoBE has drafted a concept paper including the requests for resources to be submitted for the proposal for Education Sector Funds. Also, to deal with the issue of space, FoBE is presently identifying a bigger space which could serve as a "walk-in space" filled with resources and materials for mentors' and mentees.

Secondly, the recruitment and selection of the mentors' was identified as another challenge. Here it was imperative to note that the "quality of the mentors' was particularly significant". Of course the quality of the mentor also influences the level of engagement with the mentee. It was highlighted in the workshop that the criteria for recruitment and selection should be specific. For FoBE, recruiting passionate and apposite mentors is an important component of a prosperous mentoring programme. Though, the authors are cognizant that finding apposite applicants can seem overwhelming, retaining mentors' is yet another budding issue. Thus, establishing a set criterion for recruitment and selection and matching mentors' and mentees should pave the way for enhancing a productive relationship.

The third challenge was marketing and advocacy of the programme itself. The mentors' felt there was a need to market the peer mentoring programme for FoBE. Thus, social media site such as Facebook was utilized to realize the requests from the mentors. Further to this, posters and flyers were prepared and posted on the FoBE notice board as part of advocacy efforts. In future, FoBE sees that being part of a Faculty where marketing is one of the key disciplines, it is pertinent to deploy word-of-mouth marketing as the strategic value cannot be underestimated and also to use more marketing materials. As part of the advocacy and campaign for FoBE, it is important to engage the current mentors, mentees, and members of the partnership that could potentially discuss and speak about the benefits of mentoring as well as the challenges. For FoBE another important aspect could be to bring in mentors and mentees who could offer testimonials about the effects and prominence of mentoring. Strategies to recruit mentors could include the local print and electronic media as well as creating email campaigns to reach the specific people the Faculty aims to recruit. Another strategy for recruitment could be tracking second and final year students in specific disciplines with high averages to be peer mentors. Even recruitment drive kick-off events could be an avenue to increase awareness and momentum for the uptake.

Fourthly, in the workshop, the mentor's role with the mentees was questioned. Thus, the need for training and supervision was deliberated upon. For FoBE as the way forward it is particularly important to spend time with the peer mentors to determine individual and group mentoring approaches. Another important determinant is providing mentors guidance on dealing with crisis situations, thus mentors need to know whom they can contact should a crisis emerge.

Fifthly, rewards and recognition also received attention and it was highlighted that it was a significant aspect of sustaining the morale as well as retaining the mentors. FoBE's approach to resolve this issue is to recognize the efforts of the mentors publicly through its website, social media, word-of-mouth and publications. It is mostly significant to also appreciate the mentors personally and in

writing and through regular workshops and meetings, soliciting their feedback and encouraging them to partake in the planning stages.

Other challenges which have not necessarily been highlighted through the workshop, but which the authors believe are important aspects of FoBE mentoring relates to providing mentors and mentees with the apposite tools and resources, such as meeting checklists, expectation agreements, goal setting frameworks, and training materials. It is more so vital for FoBE to also track the success of mentoring.

Conclusion
The Higher education sector is rapidly inflexed with kaleidoscopic primacies and objectives. To meet the learners' needs, HEIs are focused on the transformational benefits of peer mentoring. The mentoring process described in this paper was not systematized or incentivized at this stage. Thus it can be envisaged that for FoBE inculcating cultural sensitivity and cross cultural training for faculty, administrators, mentors and mentees to augment student support through peer mentoring combined with methods promoting collaboration of learner perspectives of the didactic environment with administration to co-design innovative tactics to support students should be at the forefront to effectively manage the peer mentoring programme and appositely address the challenges.

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Disclaimer
This study is primarily aimed at exploring the challenges with specific reference to the peer mentors' at FoBE to be able to chart the way forward to address the challenges for a more sustained experience.

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Management Education: Taking the Plunge – Lessons for the Faculty of Business and Entrepreneurship (FoBE) at the National University of Samoa

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Abstract

Whilst preceding scholarships globally discourse on "management education, its pros, cons and challenges" for Higher education, there is incontestably a dearth of scholarship in the context of the Faculty of Business and Entrepreneurship at the National University of Samoa. Naz et al. (2015) study deliberated on the South Pacific context and based on the review of the literature and theoretical underpinnings, proposed a research model for future empirical discourse. The purpose of this scholarship however, is to enlighten scholars on management education as a contemporary theme of discourse and drawing from the analyses of the literature elucidate the trends in management education, illuminate the justification for taking the plunge on management education, proposing key challenges and lessons for the Department of Management, Tourism and Hospitality in the Faculty of Business and Entrepreneurship at the National University of Samoa as it charts its way forward in the international platform. This scholarship seeks to fill in the research gap by exploring how operative changes at the institutional level in management education can enable the Faculty to strategically profile and position itself to reap the innumerable benefits from globalisation and the tech revolution.

Keywords: *Management Education (ME), Higher Education (HE), Higher Education Institutions, Faculty of Business and Entrepreneurship (FoBE), Department of Management, Tourism and Hospitality (DMTH), National University of Samoa (NUS), Information and Communication Technologies (ICTs).*

Introduction

The forces of globalisation coupled with the revolution brought about by Information and Communication Technologies (ICTs) have acclimatized the internationalisation and trans-nationalisation of Higher education (HE) and the progress of Higher Education Institutions (HEIs) in the 21st century has been mirrored through the lenses of these cutting-edge global trends, that is challenging for amendments to didactic strategic primacies; and precisely for management education (ME) (Krupa et al., 2015; Lavy and Rashkovits, 2016; Pérez-Montoro and Tammaro, 2012). ME is theorized as being principally connected to the purpose or aims of education (Bush, 2011). The history of ME dates back to the 19th century with its emergence in the US and Europe attributed mainly to societal changes resulting from trade and commerce. In the US, the emphasis was primarily on public managers in contrast to the private sector preparation in Europe (Kaplan, 2014; Spender, 2016). Scholars have deliberated that global trends (social, economic, legal-political, cultural, international) necessitate a conjoint effect as it influences HEIs and congruently HEIs retorts to these impacts via strategies and programmes (Krupa et al., 2015; Lavy and Rashkovits, 2016; Maringe and Foskett, 2010; Pérez-Montoro and Tammaro, 2012). Management educators have been incited to advance the curriculum in ways that its programme improvement, pedagogical efforts and learning backgrounds are receptive and profoundly acknowledge multiple cultures (Eisenberg et al. 2013; Erez et al. 2013; Hardy and Tolhurst 2014; Ming et al., 2013). Congruently, scholarships have also discoursed that ICTs have afforded voluminous credible and arguing assessments in the context of HE which HEIs have correspondingly responded to (Legon et al., 2019; Seaman et al., 2018). Given that management education is operative in this environment calls for a steady yet intense transformation by the management educators (Association to Advance Collegiate Schools of Business (AACSB), 2016)). Against this backdrop, it is quoted in scholarships that the number and range of management education providers is recurrently succeeding in developing countries, where both the mandate and

supply are particularly up-surging resulting in incoherence in traditional study and learning pathways (AACSB, 2011; 2016; Altbach et al., 2009; Global Foundation for Management Education (GFME), 2008). Thus, the result being that management educators in HEIs are re-aligning their programmes and curricula to encounter the diverse and fluctuating requests of the stakeholders (AACSB, 2011; 2016; Altbach et al., 2009; Global Foundation for Management Education (GFME), 2008). This respectively posits HEIs to exhibit unyielding quality assurance and accreditation and management education providers undeniably oblige strategic engagement with stakeholders (AACSB, 2016). The plunge of this is attributed to emerging imminent leaders that are needed within the developing countries with diligent skills and receptivity (AACSB, 2016). Scholars have deliberated that management education ought to be globalised and discourse the plunge towards university internationalisation (Bruner and Iannarelli, 2011) whilst Alsharari (2019) states that it is important to internationalise the market as universities are tested in turbulent environments. AACSB International (2011) findings on emerging global trends in HE discloses the gap amid what the world expects and what management educators commonly do. The areas identified include the need for quality assurance globally, solidification of international partnerships, more deliberate internationalization within the syllabus, and linking various global activities to one another through an inclusive globalization strategy. Thomas (2010) further highlights the prevailing incongruities amid the theoretical & practical dimensions in both management research and management education. HEIs therefore, mandate transformed emphasis and collaboration with industry practitioners to reinforce the curricula. Past research has mostly delved into international practices, with scarcity of research on the Pacific (Naz et al., 2015), and Samoa in this regard is no exception. Thus, this research seeks to fill in the research gap. By deliberating on the challenges of globalisation for management education, illuminating the justification for taking the plunge on management education, this study seeks to propose key lessons for the Department of Management, Tourism and Hospitality in the Faculty of Business and Entrepreneurship at the National University of Samoa as it charts its way forward in the international platform.

Literature Review: Challenges

Technological permeation of management education has elicited substantial scholarships into management learning beyond the traditional classroom (Arbaugh, 2014; Redpath, 2012). Scholarships encompass both conjectural and pragmatic work in higher education (Liu, 2012; O'Neill and Sai, 2014; Snowball, 2014; Xu and Jaggars, 2014) and management education (Arbaugh, DeArmond, and Rau, 2013). Enquiries speculate that management education research is limited (Arbaugh and Hwang, 2015) and there is also absence of committed scholars of management learning and education (Arbaugh, 2016), thus this study builds on the work of preceding scholarships as well as on the work of Naz et al. (2015) to fill in the research gap. Given the impact of ICTs on HEIs, new models such as online and hybrid learning in management education has developed in the 21st century. The curated scholarships deliberate on emerging issues such as virtual collaborations and learning outcomes, prominence of mentor and learner interactions, research methods in this area, and forthcoming research trends (Hwang, 2018). Scholars demarcate various challenges such as the significance of encompassing the practical philosophies in management learning and education in contrast to the traditional philosophies of education (Gersel and Thaning, 2020). Others also mention the emergent need for digital literacy in management education (Allen, 2020). Lamb, Hsu, and Lemanski (2020) postulates that issues of cross-cultural application makes management education challenging as well. Thus, the scholars deliberate on the importance of contextualization and translation intelligence for business schools and management educators in addressing this issue and in expediting learning beyond theories by preparing scholars with skill sets which can be utilised in management practice. Research also places prominence on more acknowledgment of dialectal and communication issues

and advocates on the role of management educators in incorporating these in management education curricula (Darics, 2019). The significance of building and enhancing links amid business and management schools to promote real-world engagement and/or communities of practice is apposite at this time given that the beneficiaries or external stakeholders should conjointly construct management education curricula (Beech, MacIntosh, and MacLean, 2010). Management educators globally have begun to revise the content and processes, in the context of classroom and hands-on experiences (Bridgman, Cummings, and McLaughlin, 2016), and management education classes around emergent didactic methodologies such as threshold conceptions (Burch et al., 2015; Hibbert and Cunliffe, 2015). Focus of management education also has been on assimilating sustainability issues and scholarship experiences in the curriculum to advance global responsiveness (Sroufe et al., 2015). Research highlights that prevailing management education that unquestionably and unwaveringly places the learner's independence, self-responsibility, and self-formation at its core will be able to circumvent inadvertent blunders and the inescapable misrepresentation that will always be part of any educational practice (Fellenz, 2019). There are also mounting apprehensions concerning gender inequality in management education which Wagstaff, Hadjimarcou and Chanoi (2020) report can be addressed by demarcating problem areas in gender equality and by identifying strategies to address this quest. Thus, management educators must gradually embrace the role of curriculum designers to address issues in management education (Hrivnak, 2019). Another contest of management education is given the internationalization market and higher education field, there is a big plunge for HEIs to go global (Alsharari, 2019). The changing nature of cross-border education has also led to an upsurge in cross-border student flow, development of training hubs and branch campuses, and the programme mobility options as revolutionized by the gigantic launch of online courses such as Massive Open Online Courses (Varghese, 2014).

The new approaches in management education are opening prospects for management practitioners to be able to explore a more balanced curricula reflecting conjectural underpinnings as well as realities/apprenticeship (Mason, Kjellberg, and Hagberg, 2014). This thus, calls for a more critical acumen to augment pedagogical and multidisciplinary progress, principally if scholars are expected to be adaptive and resourceful in the face of multifaceted challenges and, conceivably, also proxies of affirmative social change (Dehler, 2009; Welsh and Dehler, 2013).

Background: Management Education in the Department of Management, Tourism and Hospitality in the Faculty of Business and Entrepreneurship at the National University of Samoa

The National University of Samoa was established via an Act of Parliament in 1984. It is governed by the NUS Act (2006) and NUS Amendment Act (2010). The University is also subject to the requirements of the Public Finance Management Act (2002) and Public Bodies Act 2001. The NUS is also actively involved and engaged through its commitment to the Government's Strategy for the Development of Samoa (SDS) 2017-2020 via its training, research and consultancy. The Education Sector Plan (ESP) also provides the framework for NUS. The Ministry of Education, Sports and Culture (MESC), the National University of Samoa and Samoa Qualifications Authority (SQA) are the implementing agencies of the education sector objectives (Groves, 2019; Strategic Plan, 2017/18- 2020/21). The University's teaching and research mandates are delivered through six faculties namely: The Faculty of Science, Faculty of Arts, Faculty of Business and Entrepreneurship, Faculty of Education,

Faculty of Health Science, & Faculty of Technical Education, and three Centres namely: Centre for Samoan Studies, Oloamanu Centre for Professional Development and Continuing Education and the Centre of Excellence in Information Technology plus the School of Maritime and Training (NUS, 2020). Faculty of Business and Entrepreneurship is the Faculty under study. FoBE is committed to providing a globally recognized platform in the pursuit of teaching, learning, research and community outreach in the areas of tourism and hospitality, general business, office management, accounting, banking and finance, commercial law, economics, management and marketing. FoBE is comprised of two Departments; the Department of Accounting and Economics which is headed by Muliagatele Sesilia Lauano and the Department of Management, Tourism and Hospitality which is headed by Tapu Iemaima Gabriel. The Faculty aspires to offer both; freshmen and mature students an environment that is pleasant, supportive and collaborative leading to an enriched learning experience. It aims to provide quality teaching and learning and supplement research, industry insights and practical as part of class interactions to enhance the students learning process. It further intends to work with students in preparing them for active citizenship, employment and further education and in ensuring that the Graduate Attributes of the National University of Samoa are developed and enhanced. The 24th of August, 2020 marked a significant milestone for the Faculty via the signing of the Memorandum of Cooperation between the National University of Samoa and the Samoa Institute of Accountants (SIA). This signified the close collaboration amid SIA and the Faculty staff towards teaching and learning enhancements. The aim was to augment the quality and standards of the Bachelor of Commerce Accounting programme. The 22nd of September, 2020 also marked a significant achievement for FoBE and the National University of Samoa as the Memorandum of Association was signed between the Samoa Tourism Authority (STA) and the NUS to deliver the Introduction to Hospitality Training. FoBE research also forms an important part of the curriculum. FoBE's research is extremely valuable, it's significant in the economic development of the island nations, and it is very relevant in the context of the National Development Plans and the NUS Strategic Priorities. FoBE's team is very dynamic and diverse comprising of highly qualified staff that have exposure to national, regional and international work contexts (Naz, 2020a).

The Department of Management, Tourism and Hospitality (DMTH) within FoBE offers certificates, diplomas and degrees. DMTH offers courses in the business disciplines in Business Studies, Cookery, Food and Beverage Services, Hospitality, Management, Marketing, Office Management, Tour Guiding and Tourism Studies. FoBE's Corporate Plan outlines the development of a Postgraduate Diploma in all disciplines, which encompasses management, as one of its future development initiatives. FoBE had reviewed its Bachelor of Commerce structure during 2015-2016 and staff have been upskilling themselves through the Massive and Open Online Courses (MOOCs) from the Commonwealth of Learning (COL) and also through the Certificate in Adult Teaching (CAT) programme at the University. Staff have also been engaging in professional development through online and face to face studies in the Masters, Doctor of Philosophy and Doctorate of Business Administration programmes internationally. The NUS also offers trainings on Moodle for staff which enhances their online delivery via the Moodle platform. Other trainings comprise of Statistical Package for the Social Sciences (SPSS) training conducted by the Faculty of Science to help staff with quantitative analysis. The Library and Resource Centre have also offered trainings on EBSCO for research and resource access for their courses. Seminar series and research workshops have also been conducted on a fortnightly basis to encourage staff and accelerate research within the Faculty. Staff have also been actively involved in the NUS Research Forum.

FoBE had its last review in 2015 where the review panel was invited and reviews were completed. The Faculty is presently preparing for the reviews scheduled for semester one in 2021. The Curriculum

Advisory Committee (CAC) is also prominent in achieving the hallmarks of quality assurance. CAC has been stagnant and needs to be reactivated. In order to enhance the quality assurance in DMTH, the moderation process for management courses is undertaken both internally and externally. The standard process for all management staff is to ensure that the learning outcomes and performance criteria are evaluated and completed during lectures and tutorial classes. This is presently self-moderated by the individual staff members. The final exam papers are vetted by the Head of Department and senior members of the management discipline for validity, reliability and accountability purposes. External reviews are conducted every five years, to revisit what was recommended in the previous review and to monitor the progress and map strategically the way forward for the Faculty. The External Review Process is coordinated by the Academic Quality Unit (AQU) of the NUS in collaboration with the Faculty.

With respect to the mode of delivery for Management courses, the Faculty is utilizing the blended learning mode post COVID-19. Staff have been engaged in Moodle, Google classroom, and face-to-face lectures and presentations/seminars/debates in order to actively engage students. FoBE is also planning to emulate the Open and Distance learning (ODL) mode for Savaii students. Management Organization and People (HMG162) will be the first management course to be taught via the ODL mode when implemented.

Amid the COVID-19 pandemic, the DMTH has responded in dealing with students from remote areas of Savaii and presently marketing courses are also under review and development for delivery via the ODL mode for the sake of Savaii students. The Technical and Vocational Education and Training (TVET) programmes were also accredited by the SQA in 2017, and some of the management courses involved in this accreditation under the Diploma V in Business was Personal Management Skills (TBS202) and Managing Customers under Diploma V in Office Management (TOM203). At present, in management education, none of the undergraduate management courses are accredited and this is the future plan for DMTH and FoBE.

In the last five years, management education is tracked via the intake for Management courses in Certificates, Diplomas and Degrees and this is illustrated in table 1.0 below.

Table 1.0: FoBE Enrolments in Management Courses from 2015 – 2020 by Programme of Study

Year	Certificate	Diploma	Degree
2015	472	999	817
2016	512	955	803
2017	630	1134	897
2018	610	639	898
2019	583	444	696
2020	416	524	774

(Source: Compiled from the Internal Faculty Assessment Results, 2015-2020)

Table 2.0 below also outlines the number of students enrolled in each management course in the last five years which portend the fluctuation in the numbers of enrolments course wise in DMTH.

Table 2.0: FoBE Enrolments in Management Course-wise for 2015 - 2020

	Years	2015	2016	2017	2018	2019	2020

Semesters	Management Courses	Number of Students					
1	HMG162	128	186	163	189	130	170
	HMG202	73	73	70	56	70	58
	HMG205	57	59	53	69	63	55
	HMG361	47	34	43	44	42	27
	HMG362	51	42	51	28	33	18
	HMG364	50	47	35	31	34	33
	Total:	**406**	**441**	**415**	**486**	**372**	**361**
	Years	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Semesters	Management Courses	Number of Students					
2	HMG001	335	337	319	314	251	275
	HMG161	113	98	93	131	128	138
	HMG203	77	46	56	77	50	89
	HMG204	54	78	58	85	79	87
	HMG206	47	28	Not on offer	Not on offer	Not on offer	Not on offer
	HMG363	50	55	Not on offer	Not on offer	Not on offer	Not on offer
	HMG365	33	17	46	47	40	46
	HMG366	37	40	49	50	43	24
	HMG390	Not available	Not available	Not available	22	27	29
	Total:	**746**	**699**	**621**	**726**	**615**	**688**

(Source: Compiled from the Internal Faculty Assessment Results, 2015-2020)

The success of management education can be tracked through the pass rates as well. An overview of the pass rates in the Management courses foretell a successful trend. Also, it signals how well this particular field is contributing to the Faculty's future on its way forward (see table 3.0).

Table 3.0: FoBE Pass Rates in Management Courses from 2015 - 2020

	Years					
	2015	2016	2017	2018	2019	2020
Management Courses	Pass Rates %					
HMG162	89	90	90	96	89	93
HMG202	92	89	90	93	99	98
HMG205	62	64	94	90	79	89
HMG361	74	79	85	80	86	85
HMG362	98	100	100	100	91	100
HMG364	100	100	97	97	100	100
HMG001	93	90	89	92	95	Not available presently
HMG161	95	99	97	94	91	Not available presently
HMG203	96	100	98	82	89	Not available presently

HMG204	82	77	83	81	84	Not available presently
HMG206	84	100	Not on offer	Not on offer	Not on offer	Not available presently
HMG363	98	100	Not on offer	Not on offer	Not on offer	Not available presently
HMG365	79	82	100	100	98	Not available presently
HMG366	100	100	100	100	100	Not available presently
HMG390	N/A	N/A	N/A	100	100	Not available presently

(Source: Compiled from the Internal Faculty Assessment Results, 2015-2020)

Management education is also measured through the graduation rates (see table 4.0). Within the five years, statistics for successful students who had graduated with Certificates, Diplomas and Degrees are given and some of them have joined the workforce for their future endeavours.

Table 4.0: FoBE Graduation Rates in Management Courses from 2015 - 2020

Year	Certificates	Diplomas	Degrees
2015	42	29	26
2016	30	21	34
2017	50	35	36
2018	25	23	32
2019	35	21	35
2020	Not available	Not available	Not available

(Source: The National University of Samoa. "NUS Statistical Digest, 2019". Governance, Policy and Planning, NUS, Samoa)

Methodology

This study has undertaken an exploratory review of the secondary literature sourced from mainly journals. Secondary sources such as the NUS Strategic Plan, Internal Assessment Results, NUS Statistical Digest were also utilised. Minutes of past meetings have also been used.

Taking the Plunge – Challenges and Lessons for the Department of Management, Tourism and Hospitality in the Faculty of Business and Entrepreneurship (FoBE) at the National University of Samoa

A rapid assessment of the stock takes of the experiences of the COVID-19 disruption to the FoBE uncovered many significant management education challenges as indicated in the previous meetings of the Faculty. These included challenges of migrating courses online to Moodle, regularly updating Moodle, lack of resources in terms of access to online resources for preparing materials for students

and issues of Human resources as staff had to be trained. Staff have more frequently whined over insufficient online resources to facilitate preparation of course development for enhancing delivery and support for students. Studies also show that technology based learning in Samoa is still in its early stages. Key challenges include: inadequate resources, lack of training, issues of accessibility and poor internet infrastructure which all impinge on the rudiments for strategic alliances with countries and that are more resource based (Chan, 2010). This has implications for management education within the DMTH at FoBE. Resources for developing courses/content material in course delivery could be enhanced via Open Educational Resources (OERs), access to online databases for resource packages, and online e-content or e-textbooks for instructors. To improve resource management to enhance management education, at the Faculty level, administrators ought to utilize potentially scarce resources appropriately, and at the same time align their resource management strategy to the mission and vision of the Faculty by prioritizing projects and making appropriate allocations likewise. Also, the financial expenditure management practices should be monitored and transparency in the budget process should be promoted. Strict budget monitoring can permit scrutiny.

One of the responses to the COVID-19 crisis is related to the transition from face to face modes to hybrid/blended modes. FoBE has adapted to this very quickly. With respect to the mode of delivery for Management courses, the Faculty is utilizing the blended learning mode post COVID-19. Staff have been engaged in Moodle, Google classroom, and face-to-face lectures and presentations/seminars/debates in order to actively engage students. FoBE will also be emulating the Open and Distance learning (ODL) mode for Savaii students. ODL has been fully-fledged and deemed an essential global strategy in solving difficulties of access to education (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2004)). ODL has evolved as a retort to shifting students' needs, technological advances and revolution of digital and online learning (Arinto, 2016; Vlachopoulos, 2016). Management Organization and People (HMG162) will be the first management course to be taught via the ODL mode when implemented. Training was identified as the main challenge in the paragraph above. The aim of the Faculty programmes for training should target the development of wide-ranging ODL skills in a methodical and articulate ways. Teaching through ODL meritoriously necessitates skills in content development, learning activities, teaching pedagogies and strategies, and assessments. Therefore, it is not only confined to the Moodle trainings that staff have already undergone. That is why Mishra and Koehler (2006) deliberate on the integration of content, pedagogy, and technological knowledge and skills whilst the work of Arinto (2013) discourses the skills framework that addresses this requirement. Thus, it has been stated in the "Report of the Baseline Study on Technology Enabled Learning at the National University of Samoa" that capacity building for educators and orientation for learners are required to make the environment more resourceful, engaging and learning centered. The emphasis on training for educators in the use of OERs and the NUS's learning management system (LMS) was also stressed (Commonwealth of Learning and National University of Samoa, 2017). Correspondingly, ODL presents new challenges in information dissemination in the context of Samoa in management education. Mossberger et al. (2003) observes that technical competency of the distance learners poses a unique challenge and impacts the learners' ability to access resources. Thus, digital literacy is pressed (Naz, 2020).

The impact of COVID-19 on management education is also increasingly witnessed in the increased imbalance/disparity in access and retention, as at-risk students return at inferior levels due to augmented monetary and situational constraints. These at-risk students have been identified for DMTH courses and intervention strategies have been deployed by the educators.

Another challenge of management education for DMTH would arise in terms of maintaining academic standards. The main problem is that in the absence of formal teaching and education

sessions, close and systematic interface amid the educator and learner is not possible for ODL courses. Therefore, in terms of the implications for management education, it is important to prepare the resource packages by explicitly outlining the resources learners' need to aid in their learning journey. Normally for management courses, study guides are not provided. Study guides ought to be arranged and contextualized to the local issues for relevance and ease of learners' understanding for the course yet to be ventured on.

This further raises concerns for Quality Assurance (QA) in management courses including ODL delivery. Lack of concrete quality standards impacts the ability of DMTH to track problems and suggest improvements. Thus to enhance QA, internally within the DMTH, quality circles should be setup discipline wise to review resources/course developments and to map out inconsistencies in courses and/or to identify course overlaps. The quality circle should be tasked with mapping evidently the learning outcomes (LOs) and unpacking the LOs in terms of how it would be measured/evaluated via assessments. DMTH courses should also promote the use of rubrics/marking guides for all assessments. Consequently, there has to be some standardization across the DMTH courses. The implications to explore prior learning assessments and experiential learning methodologies in ODL should be conspicuous as well. Organizations with stakes in ODL such as the the Asian Association of Open Universities (AAOU), the Commonwealth of Learning (COL), the Organization for Economic Co-operation and Development (OECD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the World Bank (WB) have created toolkits and guidelines to support members in attaining and executing QA (AAOU, 2019; COL, 2009; 2020; OECD, 2020, UNESCO, 2020a, b, WB, 2020a, b). These documents serve as important routes to emulate in the context of ODL. Scholars also discourse that an ODL system mandates an all-inclusive and an assimilated online student support system to sustain the quality of ODL (Mir, 2017; Mir et al., 2019).

Conclusion

HEIs provide distinctive prospects for individual progress and equal opportunity for learners. The failure of HEIs to sustain management education can lead to perilous social commotions, as learners' may plummet out of the learning structure and become impotent in engaging in active learning thus being uncertain about the prospects of their education. Thus, management education is challenged with an enormous task of disseminating education and bridging the learning gap in society.

Undeniably globalization and revolution of ICTs have transformed management education, the pedagogics and style of management education needs to transform in lieu of the shifting priorities.

Amid the heart of ODL success in management education lies the support via resources, budget, training, human resources, content, technology and pedagogical and instructional support systems. Lack of support would cause a trickledown effect on success ultimately and lead to inactive engagement and learning. Thus, these would be key areas to consider in management education and planning/delivery.

Management education is noteworthy and necessitates a holistic and multi-disciplinary approach that facilitates transformation through policy dialogue, capacity building and quality assurance. Management education also necessitates active leadership and governance.

As the pathway is paved for management education on a global scale, the importance of contextualizing to local cases and illustrations cannot be disregarded. Communities of practice to share local best practices needs to be transferred through organizational knowledge sharing.

As the way forward for the DMTH at the FoBE, management education is presenting key challenges, however, there is a need for greater deliberation, consultation and reform.

This study was a preliminary study and was mostly secondary based, however, future studies can extend this research through in-depth interviews and surveys not just within DMTH but overall in FoBE.

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International Best Practices and Models on Public and Private Partnership (PPP): Drawing on the Policy Lessons for the Transport Sector in Samoa

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Abstract
This study examines the public private partnership models and best practices in the United Arab Emirates (UAE) and in other countries to draw policy implications for the Local Samoa Transport. The purpose is to understand the challenges from the international best practices, document the current status and identify challenges that require policy discourse in the Samoan context.
Keywords: PPP, Local Samoa Transport, Government, International Best Practices

Introduction
Definitions for the Purpose of the Research
Several models and formats of partnerships exist between public and private partners which are unique to the project requirements and subject to governmental approvals. Below are some of the widely used models in the transport sector within the international context.
- build–own–operate (BOO),
- build–operate–transfer (BOT), and
- Build–own–operate–transfer (BOOT).

Build–own–operate (BOO) was traditionally a widespread model used for PPP projects. In this type of project, the public entity sells a project to the private company that will then finance, build, own, and operate the project in its sole capacity (Cheung, 2009). However, the public entity may include certain clauses to ensure the legitimate use of property for a specified period. Build–operate–transfer (BOT) is known as a less popular form of PPP projects (Cheung, 2009). It is used when handling large-scale construction or infrastructure such as roads, highways, and rail networks (Osei-Kyei and Chan, 2015). A simple BOT example can be a commercial retail space in the downtown (Alhashemi, 2008). The government allocates the land, shares approval of the plan, designs and participates in funding of the project. On the other hand, private partner is entrusted to finance the remaining amount (Alhashemi, 2008). Once the formalities are in place, the private partner builds the retail space, leases it out, and ensures its maintenance for a stipulated period after which the space will be transferred back to the government. Thus, the ownership of this project belongs to the government (Alhashemi, 2008). The build–own–operate–transfer (BOOT) model primarily indicates that the private firm is made responsible to develop, build, own, operate and later transfer the project back. Thus, the building ownership, remains with the public entity and does not get transferred to the private partner (Alhashemi, 2008).

PPP-driven models are particularly useful for capital-demanding investments in infrastructural projects such as transport networks over land or water or the construction of manmade structures such as buildings, hospitals, hotels, schools, universities, stadiums, community centers, docks, ports and roads. The PPP models mentioned above are especially popular in the transport sector worldwide (Trujillo et al, 2018; Osei–Kyei and Chan, 2015; Sharma, 2007). Given their relevance and use in the research context of Samoa (Almarri and Abu-Hijleh, 2017), implications will be drawn for the local transport sector in present study.

Conceptualizing PPP
PPP projects are getting increasingly popular because they allow governments to offer public services in time while utilizing private firms' resources. This cooperation between private and public sectors can vary from project to project and from sector to sector. Both the public and private entities tend

to choose this kind of cooperation based on their respective competencies, financial resources, technical expertise, and the economic and business viability of the project (Osei-Kyei and Chan, 2015). A formal contract that governs all the terms and conditions is usually employed to formalize such unions between public and private partners prior to commencement of any project (Alhashemi, 2008). The main purpose served by these unions is usually innovation, development, or an investment over a pre-specified time period for the overall welfare of the general population. Scholars argue that governments tend to rely on PPP for the infrastructure needs such as hospitals, transport systems, road networks, sewage, waste management as well as construction of streets, buildings and commercial premises (Zhang et al, 2017). Over the years, PPP has been also envisaged as being a funding tool and a common theme of sharing risk as well as improvements of innovation (Kolesnikov et al, 2018). It is a system of policy transfer that has a role in commercial interest and industrial strategies.

Advantages of PPPs

Previous scholarships have discussed the many advantages of PPP projects that are going to be highlighted in this section. It is evident that a lot of interest has been garnered by PPP projects in both the academic and practitioner domains over the recent years. The early researches in PPP projects indicate that PPP projects were promoted towards private investments in public facilities and services (Askar and Gab-Allah 2002). These facilities and services were often necessary for the public, but to provide for them using public funds would have put undue burden on the government's financial status. Therefore, to make the most of the situation within the given constraints, the government provided what the general public required without having to pay for it and, in doing so, were also successful in opening up business opportunities and revenue-generating steams for the private sector. With the increased interest in PPP in different countries, the advantages associated with public and private partnerships projects have gradually become more obvious. These include the relief of financial and administrative pressure, reduction in system inefficiencies, provision of business options for the private entities, promotion of growth and employment and, finally, the allocation of government funds to high-priority causes such as education, healthcare, social welfare, defense, pension, etc. The PPP approach also establishes cost certainty before the commencement of the project. PPP is a particular approach to funding a segment of transportation or environmental infrastructure (Zhang et al, 2017). Apart from this, Osei-Kyei and Chan (2016) highlighted that, public sector is able to supply incentives for the private sectors to maintain a proper budget and time frame for a project. Development management is another perceived benefit of PPP projects—the private entities tend to accelerate progress and complete the work within the stipulated deadlines as they do not depend on the scarce sovereign resources (Cheung et al, 2012; Kolesnikov et al, 2018). Furthermore, the use of the private sector's capital, initiative, and practical knowledge not only improves the operating efficiency but also reduces the project overhead, construction, and scheduling costs. In addition to their financial benefits, PPP projects also allow for risk identification, categorization, and mitigation (Robert et al, 2014). The private sector is more efficient in service delivery and the procurement of assets and supplies; thus, allowing for better identification, prioritization, management, and control of risks factors. For instance, private contractor may take up a risk of constructing buildings, not knowing whether it will pass the usability criteria (Cheung, 2009), and the government may end up approving an environmentally risky project (Cheung et al, 2012; Robert et al, 2014). Therefore, PPP projects allow risk sharing between both private and public parties, which should be encouraged in under – researched contexts such as the Samoa transport, a gap this current study sought to address.

As the Public Private Partnership is a relatively new concept new in Pacific region and in Samoa, so it will be ideal to study the best practices of different countries (Alhashemi, 2008) and adapt them to the Samoan context in order to examine the most suitable way forward for boosting the uptake of PPP projects by the private partners and Government in the local transport sector.

Challenges in PPP Projects

PPP projects also pose certain challenges in addition to their benefits, and scholars have remarked that both the public and private partner must navigate these challenges to ensure the project's success. Particularly, Marques, and Berg (2011) were among the first to summarize some of the main the issues associated with PPP projects: (1) time costs, i.e., the amount of time required from the initial public sector assessment phase to the finalizing and signing of the contract, which may take 2–5 years; (2) transaction costs, which could be attributed to the lengthy negotiation and documentation process which may cost both the entities money and effort; (3) limited exposure due to the lack of access to or scope of the private sector, resulting in a small number of bidders showing up for the final rounds and the more capable partners left behind; (4) excessive risk exposure because, regardless of how competent the private entity is, the amount of risk the government can shift is not quantifiable; and (5) over budgeting due to cost inflations and market fluctuations amid the bidding process, which may lead to the government sector underpaying or overpaying the private sector and the private partner having no protection from the uncertainty and risks related to the market. The impact of risks on a PPP project's objectives and completion are quite defined due to economic, legal, demographics and social variables which may be further complicated due to time and commitment requirements owning to the involvement of both public and private stakeholders (Cheung, 2009). Hence, both the PPP parties need to have mutual trust and develop understanding, to ensure project timely completion, and enable the project to generate better financial, political, and social outcomes (Zhang, 2005; Cheung, 2009; Verhoest et al, 2015). Another challenge which may cause the failure of PPP projects is the need to deal with private partners. While managing PPP projects, the public entity must assess to verify that the private partners are sufficiently evaluated to ensure that they have the skills, expertise, and financial capabilities required to take up and complete the projects. For instance, the London Underground (Shaoul, 2002). Therefore, to avoid such costly mistakes, it's high time that PPP projects are managed using a constructive framework that's based on international best practices, a gap that the current study sought to address.

In the PPP contracts, the main concern for government entities is the timely procurement of good-quality assets or services with pre-specified requirements to be considered throughout the contract period (Cheung, 2009; Wu and Huang, 2015). Studies advocate for the notion that in order to promote PPP on a general scale, the governments should make efforts to regulate sector and industries but allowing enough flexibility to allow innovation and bring enhanced services to the end users (Cheung, 2009; Wu and Huang, 2015; Almarri and Abu-Hijleh, 2017). However, scholarships have also advocated that the government exercises governance and maintains checks to ensure quality and be ready to step in if any necessities are warranted (Cheung, 2009; Kolesnikov et. al, 2018; Wang et al, 2018). An efficient procurement process is crucial to shorten time consumed in negotiating and closing a deal. It may also reduce the transaction costs and promote the overall goodwill of the PPP. Research also suggests that the successful implementation of PPP requires a feasible and politically stable environment, which in turn relies on the stability and calibre of the host government (Sharma, 2007). Social, economic, and political issues that are beyond the private sector's domain should be handled and regulated by the government. In the case of any unintentional violation or breach of contract, the private sector entity or individual should be duly compensated by the government. Uncertain political and social environments have resulted in some failed PPP transportation projects, such as failed railway lines; for e.g., frequent changes in the governments of south Asian giants such as China and India have resulted in cancellation of many new PPP projects (Rwelamila et al, 2015; Song et al, 2018).

International Best Practices (IBPs)

The previous section highlighted the importance of PPP and its role in a country's economy. According to scholars Almarri and Blackwell (2014) and Dulaimi et al (2010), some of the advantages associated

with PPP projects such as the improved allocation of public funds, risk management, and capacity building, have been investigated in developed nations such as the US and UK. However, there is still a lack of research on the role of international best practices specifically in the context of Samoa. Reviewing the literature indicated that best practices vary across country, sector, industry, and projects. The international best practices research for PPP projects have been quite robust including both conceptual and empirical work. Both the public and private parties tend to develop mutual understanding and have established several differing long-term aims. For example, Sharma (2007) identified the IBPs for public entities in competitive tendering and negotiations for build–operate–transfer (BOT) projects to be based on the project's business and technical feasibility, a stable macro environment, and favourable legal frameworks. However, Sharma's (2007) study only covered selected economies in Asia and did not include BOOT and other models of PPP that are evident in the transport sector (Almarri 2017). Likewise, Wang and his colleagues (2018) reviewed the IBPs for PPP projects, but the literature review was limited to the public administration sector only. Nevertheless, identifying factors from international best practices is crucial for development of an efficient and workable PPP protocol (Almarri, 2017). In lieu of the same, Kwak and his colleagues (2009) noted that it is not possible to list out workable international best practices, as they vary from project to project and context to context. However, research argues that generally speaking, it appears that main factors which are likely to attribute to a project failure or success can be crystalized to five main aspects namely (1) governmental initiatives, such as competence and the establishing of a regulatory mechanism, (2) the private sector's skills and experience, (3) appropriate risk allocation between the PPP members, (4) project deliverables, and (5) a sound financial package. These aspects are further discussed below in relation to the best practices in different countries.

Establishment of a Regulatory Mechanism

Considering the relative importance of a regulatory and legal framework that encourages transparency and accountability is imperative for the success of any project. PPP contracts have already garnered a lot of attention in recent years especially in Western countries such as the United Kingdom, Australia and the Schengen states. These success stories provide useful examples for developing countries to reform the structure of their government projects. Even studies conducted in developing nations have indicated that the availability of a regulatory mechanism is important to promote the participation of private sectors in PPP (Zhang, 2005; Verhoest et al., 2015; Osei-Kyei and Chan, 2016). From all the existing studies, it is clear that such a framework needs to comply with the context regulatory system and be adaptable to reflect the key lessons learnt and the expertise gained if any. Thus, is it presumed that to promote collaboration between small-and medium-sized enterprises and allow PPP projects to leverage the technical expertise of the private sector, the government should take all the necessary measures to safeguard the interests of the public and private entities and maintain a transparent regulatory system which promotes economic activity. It should be noted that the federal authority in the United Arab Emirates (UAE) issued a law for PPP governance in 2015, but it was implemented only in 2017 after the UAE cabinet passed the resolution (The UAE Official Website, 2020). Given the size and scope of PPP projects, the current study provides the ideal opportunity to measure the implementation and effectiveness of the PPP law that is aimed at encouraging the private sector to participate in the development of projects and increase its investments in different fields. However, the focus of the current study is on the PPP projects of the transport sector in the local Samoan Transport sector.

Risk Sharing

Most of the PPP models commonly include guidelines on legal issues such as policies, institutional requirements, and stakeholders' needs (Alhashemi, 2008). A review of several studies has indicated that another critical IBP that needs to be considered for the success of any PPP project is that of risk assessment, including appropriate allocation and mitigation procedures (Osei-Kyei et al, 2018; Ameyaw and Chan, 2016). The transfer of risk to private entity from the public partner is one of the

most reoccurring and quite apparent best practice in the PPP projects examined in international contexts (Alhashemi, 2008). Let us consider an example from the Australian transport sector (Cheung, 2009). The construction of Cross City Tunnel project in Queensland was a huge project, but it was managed through the use of PPP project without the government having to pitch in any of its own funding. It is worthwhile to mention that the scale and scope of the Cross City Tunnel project kept its implementation at bay for nearly 20 years due to issues with the traffic, toll fares, and motorway connectivity (Cheung, 2009). One of the main reasons that kept Queensland government from taking up the project was that it did not rely on the delivery method of generating revenues as compared to the more popular traditional approaches. By transferring risk to a local private consortium, the government was finally able to compete in the market and offer the project to public users in 2005 (Chan et al, 2008). Along the same lines, it is expected that, through the systematic implementation of risk sharing in Samoan based transport sector PPP projects, not only will the number of PPPs tendered increase but there will also be more awareness on the development of Key Performance Indicators (KPIs) for PPPs as well as provide increased value to the end users. On the other hand, several studies have indicated that the risk allocation between project stakeholders is one of the most cited best practice to boost confidence in PPP initiatives (Loosemore and Cheng, 2015; Matyushkina et al, 2016). Similar views were advocated by the Dulaimi and his colleagues (2010) who studied local PPP projects in the UAE. Thus, it was propositioned that, "sharing of risks" is one of the key factors to increase the allocation of projects among private entities and encourage the participation of SMEs.

Clarity on the Scope of the Project and key Deliverables

A review of several studies (Ameyaw and Chan, 2016; Hodge and Greve, 2017; Zhang et al, 2017) indicated that it is necessary to obtain clarity on the project briefs and outcomes of the international best practices that have been adapted by developed economies to ensure the successful implementation of PPP projects. Indeed, defining the project scope and brief is considered one of the key stages for the successful execution of PPP projects. This is because every stakeholder involved in the project needs to have clarity about the goals that are to be achieved and the approach that is to be employed. The PPP project briefing and clarifying process is different from traditional projects because it helps in understanding the program, deliverables, user expectations, risk management strategy, and payment mechanism (Kolesnikov et al, 2018). A typical PPP project in any given nation or sector usually involves different private firms, contractors or even sub-contractors for specific requirements. Hence, to encourage private sector participation and SME collaborations in PPP projects, it is proposed that clarifying the project scope and deliverables should be considered a priority (Alhashemi, 2008). Moreover, given the international and local appeal of the study context, i.e., the Local Samoan Transport sector, and that project briefs are vague at times, clarifying the project requirements and adopting them as a benchmark becomes more relevant. A clear project brief can enable one to avoid the consequences of inappropriate risk sharing between the parties, reduced flexibility, hidden costs, and compromised accountability. Furthermore, the involvement of the end users in the brief development and clarification provides an ideal opportunity to address and draft the output specifications in an accurate and precise manner. This is even more relevant to the transport sector, wherein the performance requirements usually last for longer durations, sometimes 5–10 years. Therefore, it is plausible that clarity on a project brief and its outcomes in the international best practices that have been adapted by developed economies helps ensure the successful implementation of PPP projects, and this may be the case for the local Samoa Transport as well.

Competence of Private Members in PPP

With time, PPP projects are anticipated to experience more growth worldwide. This is because, firstly, the private sector is more in touch with the general public end user due to its societal position and ease of access and will, hence, gain clearer insights about the needs of the public sector client over time (Ghobadian, 2004; Cheung, 2009). Secondly, the private sector has more to offer than the public sector in terms of technology, knowledge, and skills due to these companies' extensive experiences in

the real-time market, thereby enabling them to provide better quality of facilities and services. The competence and technical expertise of the private entities have been found to be important factors for the allotment of PPP projects to SME companies (Kolesnikov et al, 2018; Almarri, 2017). This indicates that upskilling the private sector and building their capacities would help governments deliver their projects in the most efficient ways. Efficiency with any PPP project is expected when the private party involved is experienced and has reputation in the market for doing projects on similar scale. Furthermore, the availability of working capital and technical expertise needed for such projects also plays a huge role in whether the PPP outputs are delivered on time and within the pre-specified budget. Thus, it is propositioned that the skills and experience of private entities will foster technical excellence and innovation in the PPP projects. This is because, by drawing from its technical knowledge and vast experiences, a competent private entity also integrates all of its project phases under a single enterprise system that covers initiating, planning, leading, cost and time estimation, resource allocation, labour division, work breakdown structures, and other necessary project documentations (Sanni, 2016). One more major advantage of using private entities in PPP partnerships is that most of the PPP solutions require a high level of capital investment for the establishment of big scale projects such as buildings, schools, hospitals and road networks. The financing of such projects by the private sector has allowed many mega projects to commence earlier than the stipulated time period, which also means that they were completed early (Kolesnikov et al, 2018).

Availability of Funding
Handling the development and scope of projects, especially PPP projects, requires organization and commitment from the public entities involved. These public entities are not always expected to provide funding for the PPP projects, but one of their primary roles while managing PPP projects is to ensure that the appropriate project financing options exist to attract private sector investment. According to Jovanic and Sredojevic (2017), a stable macroeconomic environment is critical to make case for a successful PPP project. Availability of attractive and flexible financial instruments such as debt and equity credits, security and hedge funds is considered to be vital sources of capital for private firms looking to fund the PPP projects in the long run (Ismail, 2013). In another study by Sanni (2016), the "availability of financial markets" emerged as one of the key reasons for successful development of PPP projects in Sub-Saharan nations such as Nigeria and Ghana. Along the same lines, Ismail (2013) remarked that "easy access to funds/financial markets" was credited with the successful development and implementation of several PPP projects across Malaysia. Many researchers (Zhang et al, 2017; Almarri, 2017; Kolesnikov et al, 2018; Wang et al, 2019) have found that the availability of funds is correlated to the uptake of PPP projects by the private entities. Relating it to current study's context, the stable political system and favourable economic conditions in Samoa should attract leading financial institutions and international banks to collaborate and invest in PPP projects across the country. Hence, it is suggested that "ensuring funding availability" should be adopted as an international best practice as it is likely to encourage further collaboration between the private and public sectors. Furthermore, it will also contribute to the development of technical excellence by promoting employment opportunities. Overall, to increase the involvement of the private sector in PPPs, encourage the participation of SMEs, and foster technical excellence in the execution of PPP projects, exploring the suggested IBPs at length was one of the primary objectives of the present study. The detailed review of the empirical evidence in previous works indicates that, to create an environment that supports product and process innovation, PPP projects must adapt the five main IBPs mentioned above.

Methodology
This study has undertaken an exploratory review of the secondary literature sourced from mainly journals and the Government of Samoa website. Primary data has not been collected. Discussion and policy implications are derived from the secondary sources/reviews.

Discussion: Context of Study: PPP in Local Samoa Transport

Samoa is a Polynesian island country consisting of two main islands, Savai'i and Upolu, two of the smaller inhabited islands, Manono and Apolima, as well as several small uninhabited islands including the Aleipata Islands (Nu'utele, Nu'ulua, Fanuatapu and Namua). The capital city of Samoa is Apia and it follows the parliamentary democracy and is a member of the Commonwealth of Nations[4]. With reference to the Samoan economy, it has been traditionally reliant on development aid, family remittances from overseas, tourism, agriculture, and fishing, with a nominal Gross Domestic Product (GDP) of $844 million. Approximately ninety (90) percent (%) of exports are from the agricultural sector which includes fishing, fish, coconut oil, nonu products, and taro. The manufacturing sector on the other hand, contributes twenty-two (22) % of the GDP and less than six (6) % of the work force, whilst the service sector attributes for nearly two-thirds of GDP and engages approximately fifty (50) % of the labour force. The other sector which is growing is the tourism sector, making up twenty-five (25) % of the GDP. Samoa is susceptible to storms. In September, 2009, the economy was struck by an earthquake and the follow-on tsunami ruthlessly impaired the economy and the nearby American Samoa, disrupting transportation and power generation, with a resulting death toll of two hundred (200). In December, 2012 as well, widespread flooding and wind damage from Tropical Cyclone Evan endangered the lives of four (4) people, displaced over six thousand (6,000), and spoiled or demolished a projected number i.e: one thousand and five hundred (1,500) homes on Samoa's Upolu Island. The Government of Samoa continues on its deregulation journey, encouraging investment, and continues fiscal discipline, while at the same time maintains its commitment in protecting the environment. The foreign reserves of the economy are relatively fit and inflation is low, but external debt is approximately forty-five (45) % of GDP. Samoa has become the one hundred and fifty-fifth (155th) member of the World Trade Organization in May, 2012, and proceeded from being a least developed country status in January, 2014 (CIA World Fact book, 2020).

With reference to the context of the local Samoa Transport industry, the Government of Samoa considers that a competent, highly synchronized and well succeeded transport system is an indispensable pre-requisite for continued economic growth for the nation. The Transport Sector Plan (TSP) 2013-2018 delivers the essential whole of sector framework which sets the basis of monitoring the development and funding of the sector in the next five years that is consistent with the general policy objective as stipulated by the Ministry of Works Transport and Infrastructure ((MWTI), 2019a). The Strategy for the Development of Samoa (SDS) for the period 2016/17–2019/20 stipulates in Key Outcome 10: Transport Systems and Networks Improved as one of the main outcomes.[5] Samoa's susceptibility to natural disasters has been a major concern given that approximately seventy (70) % of the population, the transport infrastructure, including the main international airport and seaports, are all situated in low lying coastal areas. The key goals and strategies therefore of the Plan are the unswerving responses to this exposure to minimise infrastructure destructions and interruptions to the movement of people, goods and trade; to advance safety and security in-lieu with best practices for all transport service providers and users; to progress proficiency and competitiveness including outsourcing to and partnerships with the private sector; to confirm augmented and sustainable funding for transport infrastructure maintenance and; to assimilate environmental sustainability, climate change adaptation and energy efficiency into all transport infrastructure planning, design and construction (MWTI, 2019a). The Transport Sector Plan 2013 – 2018 has been the first for Samoa. The transport sector is one of the fourteen (14) key sectors of the Samoan economy and emanates under the Infrastructure Broad Sector. The transport sector covers land, maritime and air transport which is

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[4]https://en.wikipedia.org/wiki/Economy_of_Samoa
[5]Strategy for the Development of Samoa (SDS) for the period 2016/17–2019/20. Available from: http://extwprlegs1.fao.org/docs/pdf/sao165879.pdf

parallel with the classification under the International Standards on Industrial Classification (ISIC). The MWTI is the principal agency in the sector and is chiefly answerable for policy, planning and regulatory functions and oversight of the sector. Other agencies in the sector are the Samoa Airport Authority (SAA), the Land Transport Authority (LTA), the Samoa Ports Authority (SPA) as well as public and private operators of maritime (shipping) and aviation (airline) services (MWTI, 2019a). The transport and communication sector contribution to GDP at market prices exhibited a noteworthy growth of eighty-nine (89) % ($85 million to $162 million) from 2001 to 2012 (MWTI, 2019b). The total annual running costs (operational plus salaries) for key agencies MWTI, LTA, SPA, SAA, and SSC in the financial year (FY) 2012/13 were $ 69.08 million. The key challenges for the sector as identified in MWTI (2019a) were as follows: (a) to endorse strong leadership and commitment from the Chief Executive Officers and senior management officers of the sector agencies; (b) to progress coordination and communication among sector agencies in implementing the TSP; (c) to develop strong partnerships between government, the private sector and donors, to achieve the goals and outcomes of the TSP thereby contributing to the achievement of its vision "a sustainable, efficient, safe and environmentally responsible transport network that supports Samoa's economic and social development and contributes to improving the quality of life for all Samoans" (MWTI, 2019a, p.28). In the Transport Sector Plan 2013 – 2018, Sector Analysis Volume II Report, funding for road construction and maintenance was presented as a major challenge to the public sector, predominantly resulting from the budget constraints enforced by the requirements for debt service payments. It was indicated in the report that the significance of exploring further prospects for private sector participation was predominant to be able to recover costs via user-pays fees in the construction of new roads (MWTI, 2019b).

Now Samoa has had a very resilient emphasis on economic and social development, which has been accomplished by its Public Bodies that deliver quality services. The Ministry of Public Enterprises (MPE) was established in August, 2015 by the appointment of the Cabinet. The MPE intends to make a noteworthy influence on Samoa's economic growth through strategic leadership and oversight of the Public Bodies. At the moment, there are twenty-eight (28) Public Bodies under the management of the MPE, stretching from the Electric Power Corporation to the Samoa Ports Authority. The MPE plays a dynamic role in certifying that all Government Public Bodies conform with the Public Bodies (Performance and Accountability) Act 2001. With the institution of the MPE, explicit emphasis has been on augmenting the financial performance and compliance of all Public Bodies to progress and heighten the services to the public[6]. In 2017, the first Corporate Plan 2017 – 2020 was circulated by the Hon. Lautafi Fio Selafi Purcell, the Minister for Public Enterprise[7]. The Corporate Plan outlined the strategic goals and intentions for the period until 2020, and was aligned with the Strategy for the Development of Samoa (SDS). The first step towards meeting the objectives of the Corporate Plan 2017 – 2020 was to upsurge the MPE's familiarity about PPPs. Since the MPE had diminutive preceding know-how with PPPs, a knowledge partner was recognized that could inaugurate PPP Practices and transfer knowledge to the MPE. The MPE acknowledged a number of experts that had involvement with the World Bank PPP program, and contracted a PPP specialist, Dr. Ronny Carbonell, and Accredited Training Organization (ATO) Cybiant to support with the enactment of the PPP Best Practices. The principal objective was to transfer knowledge about the structure and the set-up of PPPs, and ascertain virtuous practices and procedures that could permit the Government of Samoa to discover and evaluate PPP projects. The MPE unquestionably forged ahead with the realization of Goal 4 that is; effective identification, implementation and monitoring of PPP and Privatization programs with backing from the Asian Development Bank (ADB) in developing a training programme for MPE workforce in Samoa[8]. Over a period of 12 months, sequences of three weeks of trainings were

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[6] For more information on the MPE please see: https://www.mpe.gov.ws/
[7] The full Corporate Plan 2017 -2020 is available at: https://www.mpe.gov.ws/publications/
[8] https://www.cybiant.com/resources/public-private-partnerships-samoa/#_ftn2

conducted in Samoa, using the certification programme that had been developed by APMG-International. APMG (APM Group) International is the most reputable global accreditation and examination institute[9]. The first batch included thirty (30) participants in the three day PPP Foundation programme in 2018. A nominated group successively embarked on the 'Practitioner' courses, which delivered in-depth and professional knowledge. Both the PPP Preparation and PPP Execution courses were piloted in Samoa in 2019, with the support of the Asian Development Bank[10]. The courses were presented by Cybiant, the first training organization in Asia that embraced the PPP programme, and which became an Accredited Training Organization (ATO) [11]. The PPP certification programme was settled in August, 2019. Samoa has been the first Pacific country that had hosted the structural programme that transferred knowledge about PPPs based on the APMG-International and World Bank programme. The MPE training contenders were the first in the Pacific Region to be bestowed the "Certified PPP Professional" designation. In the progression, Samoa has become the lead model in the Pacific Region to showcase the significance and paybacks of PPPs[12].

The Ministry for Public Enterprises (2017) has stated that a PPP is more like an agreement linking Government and the private partner that would be working together in a structure, where either all or most of the risks which were customarily born by the Government under the traditional public procurement, could be transferred to the private partner to manage the cost effectively in a duration that classically should be long term in nature, for example 15-40 years or more. It also states that the Government can be exemplified by the "Government agency" i.e: State owned enterprises (SOE), Ministries or departments, whilst the private partner can be signified by a private business. The context in which the PPP model is framed states that it differs from the traditional public procurement, mainly because it can package all or maximum risks in the partnership such as in design, construction, finance, maintenance and often operation, with the focus on service results being delivered by the private partner. It was further stated that the selection of the PPP model is reflective of the risks allocated between the Government and the private partner. The selection of the PPP model is also dependent upon the nature of the project, market conditions for third parties including contractors and suppliers, financial market conditions, and notably the enthusiasms for risk assessment in the public and private sectors (The Ministry for Public Enterprises, 2017). The PPP models include the following:

1. Design Build (DB) or construction management: In this model, the design and construction are anticipated by the private partner, and all financing obligations are handled by the Government which is analogous to the traditional public procurement system. This is reflected in cases where reimbursements are restricted from long-term maintenance and asset management (The Ministry for Public Enterprises, 2017).

2. Design Build Finance (DBF): In this model, the construction funding is added to the private partner under the DB model, and the Government refinances the project at considerable accomplishment of construction. This helps the Government to defer payments to the private partner, particularly in cases where the Government has financial restrictions (The Ministry for Public Enterprises, 2017).

3. Design Build Finance Maintain (DBFM): This is the most predominant PPP model where the private partner shoulders the risks of design, construct, maintain, rehabilitate and financing the asset for a long period of time, and turns management's back to Government in a prescribed condition. As most risks are transferred to the private partner and this model tends to produce

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[9] More information about the certification program is available at: https://apmg-international.com/product/ppp-certification-program

[10] https://www.cybiant.com/resources/public-private-partnerships-samoa/#_ftn2

[11] More information about the different PPP education programs: https://www.cybiant.com/public-private-partnerships-training/

[12] https://www.cybiant.com/resources/public-private-partnerships-samoa/#_ftn2

supreme welfares to the Government in the form of efficiency and innovation (The Ministry for Public Enterprises, 2017).

4. Design, Build, Finance, Maintain and Operate (DBFMO): This is a model where an operating function is added to the private partner under the DBFM model, subsequently as the operation and maintenance functions are highly integrated (The Ministry for Public Enterprises, 2017).

5. Outsourcing of Operations, facility maintenance, and/or rehabilitation: This is the case of contracting-out whereby the Government describes characteristics of the project (new or to replace an expiring arrangement) and contracts it out to a private partner to perform the core services (The Ministry for Public Enterprises, 2017).

6. Performance-based maintenance: The private partner sustains the current public infrastructure in line with the indicated performance levels. For example, the private partner is contracted by the Government to maintain a section of the road network to specified standards, such as with respect to smoothness and rutting etc, and is paid a regular service fee (e.g. quarterly). The service fee is halted if performance standards are not met (The Ministry for Public Enterprises, 2017).

7. Operations and maintenance (O&M): The private partner sustains and manoeuvres the existing public infrastructure to deliver services to the indicated performance requirements. For example, a private partner is contracted by the Government to operate and uphold an existing hydro-electric plant to produce electricity in harmony with the protocols set out in the contract. The private partner is paid a regular service fee (e.g. quarterly) by the Government and as applicable, a payment to cover the operating costs. These payments are abated to the extent that contractual performance standards are not met (The Ministry for Public Enterprises, 2017).

8. Joint Venture between the Government and the private partner: An institutionalized PPP model (mixed companies) implies the formation of an entity held conjointly by the Government itself or a Government agency, and a private business to perform a task for the benefit of the public, and in doing so, all or most of the risks are to be performed by the private business involved. Example, Pacific Forum Line (PFL) Group jointly owned by PFL Samoa and Neptune Pacific Line, and Virgin Samoa jointly owned by Government and Virgin Australia (The Ministry for Public Enterprises, 2017).

The Ministry for Public Enterprises (2017) also stipulates the PPP framework which is designed so that the following accrued paybacks are recognized:

- Greater efficiency in the use of resources over the lifespan of the asset as the private partner has an enticement to consider the long-term repercussions of the costs of design, construction or expansion.

- Whole-life and optimum asset management can be fortified via setting a stable price, or an indexed maintenance budget (with penalties if event maintenance is not executed) in the contract.

- Capital at risk to certify virtuous performance that echoes explicit exposure of capital to long term performance risks, which then gives the private partner an enticement to design and build the asset on time and within budget, and to confirm that it will perform and be available.

- Transparency and scrutiny mirrors the benefits of having a prompt and advanced planning, which necessitates full analysis of the project's long-term risks and costs, generating a more educated and convincing debate on project model, and places focus on outputs and results rather than inputs.

- Strong long-term affinity of interest imitates the long-term nature of the contract, which differs from the traditional procurement contracts where the Government entices to nit-pick decisions and carries much of the associated risks.

The description of the PPP Framework frequently follows the classic process for developing and implementing PPPs that is advanced planning, procurement, and contract negotiation. Samoa has

been well placed to achieve the prospective paybacks of PPPs as in addition to developing and implementing PPP Guidelines, it already has put in place a range of corresponding measures to advance infrastructure performance, such as an independent multi sector regulator and a Ministry to screen the performances and governance of SOEs. While there is certainly scope to expressively augment regulatory, corporate governance and SOE performance monitoring in Samoa, the fundamentals already exist (Ministry for Public Enterprises, 2017).

The MPE which has been tasked with heightening Samoa's PPP is now better certified to do so, with two public servants that have completed a year-long certification programme. MPE's Assistant Chief Executive Officer, Fogapoa Samoa, and the Principal Privatisation Analyst, August Ah Yen, are the first Samoans, and among the first in the region, to become Certified PPP Professionals. Mr. Samoa stated that PPP's "are a more modern approach to developing major projects, especially in infrastructure, which is why the Government is choosing to upskill in this field"[13]. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) highlights the challenges of PPP's in Samoa including: difficulty of the PPP paralleled to the Samoan private sector capacity and enthusiasm of the Government Ministries and SOEs to agree the PPP programmes, mainly when such a PPP aims at the heart of the corporation's existence.[14]

Drawing on the Possibilities of PPP for Local Samoa Transport
Case 1: Success of the Government of Samoa and Australia's Virgin Blue
The last model employed by the Ministry for Public Enterprises (2017) is the Joint Venture model in which the Government joins with the private partner. This has been evident via the joint venture amid the Government of Samoa and Australia's Virgin Blue, a low-cost carrier, which spun an annual $7.5 million government subsidy into a $6.9 million profit in only two years. The International Finance Corporation (IFC) served as the lead advisor for the innovative PPP, which recognized a new national airline, Virgin Samoa (formerly Polynesian Blue), and restructured the existing flagship carrier. The agreement was signed in September, 2005. By 2009, 243,000 people received enhanced airline service, and consumers saved $57.7 million in cheap airfares between 2005 and 2009. The joint venture agreement allowed Polynesian Blue to take over the international routes and the restructured flagship carrier, Polynesian Airlines, to operate regional and local flights. Under the agreement, the international aviation investor managed and operated the new airline, provided the fleet capacity as well as commercial and managerial oversight whilst the government provided traffic rights, operational support, flight operations personnel, and other productive assets. The government also took the lead in discussing local contracts, mobilizing stakeholder support, and championing the business. The model was designed to take lead of the international partner's cost structure, leverage marketing and distribution fortes, and exploit profitability. Meaningfully, the structure permitted a low-cost carrier to participate, a first in airline privatization[15]. From a profitable and executive perspective, stakeholder management can expedite efficacious project execution (Manowong and Ogunlana, 2010) in terms of time, costs, and quality. Active stakeholder management has been established as preventing delays and augmented costs that may occur (Harris, 2010). Stakeholder management has also superiorly ensured the successful implementation of PPP projects, and this is the case for the local Samoa Transport.

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[13] https://www.samoaobserver.ws/category/article/55776
[14] https://www.unescap.org/sites/default/files/Samoa%20PPT.pdf
[15] http://documents1.worldbank.org/curated/en/474741468188942746/pdf/96932-BRI-PUBLIC-PPPStories-Samoa-VirginSamoaAirlines.pdf

Case 2: Success of the Contracting out of Public Works Department (PWD)

The fifth model of PPP as advocated by the Ministry for Public Enterprises (2017) is the outsourcing or contracting out. Samoa's triumph in contracting out to the private sector the functions of PWD is one of the most fruitful reforms to elevate infrastructure; advance the effectiveness of public expenditure; and upsurge the overall employment, productivity, and capability in a Pacific island economy in the preceding 20 years. This reform has ensued in the formation of nearly thirty (30) new Samoan road construction and maintenance companies. Therefore, directly and secondarily, the reform has steered to the formation of more than two thousand (2,000) new jobs, making this a leading illustration of the supremacy of PPPs to endorse economic development and upsurge employment. Prior to the reform, much of the work was undertaken incompetently by the PWD, or by foreign companies under contract. All construction and maintenance now in Samoa is outsourced to Samoan companies, which are satisfactorily prolific and profitable and in present times foreign firms now scuffle to contest. This landmark reform validates that contracting out to the private sector progresses productivity and results in significant gains in employment. This landmark reform was attained through patience in scheming and undertaking the reform, as well as all-encompassing and lengthy implementation were the keys to success. The PWD reform took nearly a decade to implement fully, and required the assurance and support of the Prime Minister, cabinet, and civil service. Careful planning and extensive consultation were crucial to obtaining support for such radical reform[16]. These have been the very drivers of the success of the PPP in Samoa.

Implications

PPPs are on a roll in Samoa. With the augmented political support given to this initiative, coupled with the explicit frameworks from the MPE and the momentum of capacity building has evidently showcased the success of the PPP model. This is further complemented via strong stakeholder management, well designed negotiation process and clear frameworks that are crucial to achieving sustainable solutions as witnessed in the PPP successes.

Conclusion

PPPs have grown in popularity in Samoa and the Government has flexibly adopted this to achieve success. The successes have been showcased and improvements have been highlighted. Based on the available research on international best practices, this paper presented an analysis of the PPP literature. It has been documented in Samoa that the public and private sector actors can develop mutually beneficial and economically viable solutions to benefit the transport industry in particular and the population of Samoa at large. Ultimately, outsourcing and joint ventures have remained a highly significant and valued approach for sinking cost, accessing talent and taking lead of skills and capability.

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[16] https://www.adb.org/sites/default/files/publication/190073/samoa-jobs-ppp-reform.pdf

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Exploring the influence of prior knowledge and gender on student academic performance success in Samoa

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Abstract

Research identifies student academic performance success as an important element in achieving and maintaining the quality of teaching, accreditation and university reputation. This study examines the influence of prior knowledge and gender on the academic performance success of students in the foundation commerce program at the National University of Sāmoa (NUS). It employs a quantitative regression analysis approach to provide empirical evidence of the correlations between the two variables associated with student's academic success in the formal assessments undertaken by foundation-level students, in the academic years 2001 and 2007. The findings suggest that students' prior academic performance success in the disciplines of Accounting, Economics, English and Mathematics, strongly influence their academic performance at the foundation level. In addition, gender differences indicate that female students performed significantly better than males in accounting and economics courses for both the secondary and foundation year. This study provides a contribution to the literature on student academic performance success and the findings also provide implications for educators, administrators, policy makers to design curricula and assessment for accounting courses to cater for students and for higher education enrolment policies.

Keywords: *Accounting Education, Academic success, Prior learning and gender*.

Introduction

In the last two decades there have been calls for reform within accounting education (Albrecht and Sack 2000; Apostolou et al., 2016; Bobe and Cooper, 2020; Byrne and Flood 2005; Kimmel, 1995; O'Connell et al. 2015; Stone et al. 1996; Tan and Laswad, 2015), and the impact of understanding what influences students' academic performance in accounting has much value for educators, professional accounting bodies and future employers today. A better understanding of the factors influencing students' academic performance success would assist them in developing appropriate teaching strategies conducive to the learning needs of their students. As noted by Friedlan 1995, the impact that educators have on students is not to be ignored, and the teaching approaches used can have significant effects upon students' perceptions of both accounting as a discipline, and the job itself, once they are working as practitioners. There has been a greater focus on accounting at university level, and what factors can impact upon student academic success (Dull et al., 2015; Cheng and Liao, 2016; Sithole, 2018). Many of the research that has attempted to identify and analyse the factors that explain differences in academic performance presents a variety of conflicting and albeit contradictory conclusions.

In particular, university students' academic performance in accounting course is an area of considerable interest to both accounting academics and students (Bobe and Cooper, 2020; Byrne and Flood, 2008; Christopher and Debreceny, 1993; Gracia and Jenkins 2003; Jackling and Anderson, 1998; Koh and Koh, 1999; Tan and Laswad, 2015; Tan and Lawad, 2008). Academic scholars are keen to understand the causes of variation in students' academic performance as it would assist them in developing appropriate teaching strategies conducive to the learning needs of their students. Moreover, students' academic performance in the introductory accounting courses can also be an important determinant of students' subsequent performance in the undergraduate accounting curriculum (Dockweiler and Willis, 1984). While this research stream has occupied researchers in different disciplines for many years (for example, Alfan and Othman, 2005; Bergin and Reilly, 2006), and has had some impact on educational practice, there is a need to both replicate prior studies in different settings and at different points in time and to extend that existing research to consider the potential impact of a wider set of factors on successful students' academic performance (Stout and Rebele, 1996).

In Samoa, the Faculty of Business and Entrepreneurship (FOBE) at the National University of Samoa, considers academic performance success significant for students, staff, departments within which they study and the faculty as a whole. Academic failure creates emotional and financial costs for individual students and the FOBE may also suffer as its retention rates fall, adversely impacting on its operational position in the university with consequential financial penalties. For instance, academic failure reduces the number of students progressing through its undergraduate program which directly reduces the student enrolment on which fees and funds may be claimed. Another impact is that withdrawal during the academic year reduces both the head count and revenues for the current year.

The FOBE offers mainly accounting and economics courses as part of its university preparatory or foundation year commerce program. Entry requirements into the foundation commerce program was based on the aggregate of English and best four subjects in the regional examination, the Pacific Senior Secondary Certificate (PSSC), however, this has changed to the Samoa Secondary School leaving Certificate (SSLC), following the establishment of the national exam. Since before the change to the national examination, there have been increasing concerns regarding the poor performance of students, as indicated by the low pass rates at the foundation commerce program from 2001 to 2007. According to the Asian Development Bank's 2007 Completion Report on Samoa's Education sector project, the number of students passing PSSC accounting and economics for Samoa, has increased by 10 percent between the years 1998 to 2005 (Asian Development Bank, 2007; 2008). However, a cause for concern lies in the negligible increase in the PSSC averages in both accounting and economics for this period with average marks for the PSSC accounting increasing from 48 percent in 2001 to 51 percent in 2005 while PSSC economics has increased from 48 percent to 50 percent over the same period.

This paper proceeds as follows. Section 2 provides a summary of the prior literature which is relevant to this paper. Section 3 identifies the research questions and Section 4 describes the research method. Section 5 presents the results and discussion. The paper concludes by stating the contributions of this work, limitations of the study and some suggestions for further research.

Literature review

International research suggests a wide variety of factors as predictors of student academic performance. According to Grebennikov and Skaines (2009), the factors which are commonly recognised include academic achievement and qualifications prior to entry into the university/foundation level and gender.

Prior knowledge

The accounting education literature indicates that variation in students' performance in introductory accounting course could be attributed prior knowledge (Abhayawans et al. 2012; Alcock et al., 2008; Beatson et al., 2020; Schroeder 1986; Mitchell 1988; Bartlett et al. 1993; Jackling and Anderson 1998; Koh and Koh 1999; Papageorgiou and Halabi, 2014). However, the results of various studies (Keef and Hooper, 1991; Keef, 1992) are inconclusive or contradictory.

McKenzie and Schweitzer 2001 found previous academic achievement at secondary level to be widely regarded as the best single predictor of subsequent success at tertiary level. Studies have also found prior academic performance in any academic subject, a strong predictor of current academic performance (for example, Alcock et al. (2008); Auyeung and Sands 1993; 1994, Grebennikov and Skaines 2009, Hamdi et al. 1992, McClelland and Kruger 1993, McKenzie and Schweitzer 2001).

Other studies have also looked at the impact of prior secondary school performance in individual disciplines at foundation or university entrance level courses. For instance, Mitchell 1988 found that students with prior knowledge in accounting and mathematics perform significantly better than those without. Correspondingly, Gul and Fong (1993), Tho (1994), Tickell and Smyrnios (2005) confirm that prior accounting knowledge has a significant positive influence on academic performance in accounting. Using examination marks as measures of student academic performance, Byrne and Flood (2008) indicated a significant association among prior knowledge of accounting and students' academic performance in the first year of an accounting program at an Irish university. Papageorgiou and Halabi (2014) found that prior accounting knowledge is important in the first year of study but not thereafter. In addition, mathematics background and academic aptitude were both significantly associated with student performance throughout the financial accounting subjects (Papageorgiou and Halabi, 2014). Abhayawans et al. (2012) also examined the impact of prior learning on students' current approaches by comparing the students' approaches to learning of accounting students admitted to university in Australia on the basis of Institutes of Technical and Further Education (TAFE) qualifications and through direct entry mode. The findings from Abhayawans et al (2012) suggested that prior TAFE learning experience impacts student learning in university. Moreover, Yusuf et al. (2018) examined the impact of prior knowledge from the conceptual and metacognitive dimensions on academic performance in the first year accounting course. From their ordinal regression and STATA methods carried out, prior knowledge was found to have significant impact on the performance in the first year accounting course.

In contrast, other studies (Baldwin and Howe 1982, Bartlett et al. 1993, Bergin 2006, Doran et al. 1991) found that students with prior accounting knowledge did not attain significantly better academic performance than students without previous exposure to accounting. Results from the Bartlett (1993) study also indicated that while prior accounting knowledge may affect academic performance positively at the initial stage of studies, this advantage tends to disappear soon after.

For the subject of economics, studies have indicated that secondary school economics performance is related to tertiary economics performance. Downes (1976) found in an early study based on an Australian university campus faculty, that economics and mathematics are significant in explaining first-year performance in all subjects in the faculty. Milkman et al. (1995) also explored the relationship between mathematics and economics. The positive correlation between secondary school economic performance and university entrance level economic performance is also affirmed by Evans and Farley (1998). In addition, Brückner et al (2015) analyzed the status of economic knowledge of students at the beginning of their course of studies and compare the effects of prior economic education between the USA and Germany. Their results indicated that if micro- and macroeconomics are analyzed separately, divergent effects on the students' economic knowledge were detected showing that prior education has a positive significant effect merely on micro test scores in both countries.

Contrarily, in the reviews of Siegfried and Fels (1979) of mainly US studies, prior knowledge in secondary school economics was not found to be related to tertiary level economics courses. Anderson et al. (1994) found the relationship between performance in economics at secondary school and university economics performance to be complex and a positive relationship only for relatively successful secondary students. Cohn et al. (1998) examined data from the University of South Carolina and found no significant effects of math background on learning in principles of economics.

Gender
Investigations on gender are known to be rooted in the fascination with how males and females differ in terms of academic performance (Enget et al., 2020; Eskew and Faley 1988; Fallan and Opstad, 2014; Hayes and Lin 1994; Jackling and Anderson 1998; Keef and Roush, 1992; Koh and Koh 1999; Nouri and

Domingo, 2019). Gender socialization is considered to be a strong and differing force capable of rendering permanent distinctions between men and women (Fogarty and Goldwater, 2010). Prior studies have provided descriptive evidence on the magnitude of achievement by male and female students and indicate that gender has been identified as a significant source of variation in performance.

For instance, various studies have shown that female students outperformed male, often at higher levels of significance (Carpenter et al 1993, Dobson and Sharma 1999, Fraser et al 1987, Schivaswamy and Jebara 2010, Nouri and Domingo, 2019; Win and Miller 2005). Nouri and Domingo (2019) provided empirical evidence on the interaction between gender and transfer students' academic performance and found that female students performed better than male students in accounting courses. Female students also dominated male students in academic performance in foundation level or university entrance level accounting courses in the following studies: Everett and Robins 1991, Hamdi et al. 1992, McClelland and Kruger 1993, Tinto 1993. In contrast, Fallan and Opstad (2014) found that when gender is combined with personal preferences male students perform significantly better than their fellow female students in management accounting.

Significant differences have also been found in student academic performance in economics. In contrast to previous studies in accounting, male students appear more persistent than female students in economics courses (e.g. Anderson et al., 1994; Douglas and Sulock, 1995; Heath, 1989; Tay, 1994). More recently, male students have also been found to perform better than females in economics by: Brückner et al (2015), Davies et al. (2005) and Owen (2011).

Other studies have indicated that there is either a weak or non-existent difference in performance between male and female students, especially when the results are controlled for prior academic knowledge (Arbaugh 2000, Jackling and Anderson 1998, Monem 2007 and Wallace and Clariana 2005). Research has also indicated that performance between genders, once equalized for differing levels of prior knowledge, is equivalent (McKenzie and Schweitzer 2001).

As NUS educators have witnessed the gradual feminization of the accounting and economics majors, as well as the university in general over the past years, it is important to look at the gender performance differences. This shift in the population provides an opportunity to study possible gender-based performance differences amongst students. Consequently, interest and concerns generated from such observations provided motivation for further investigation into the predictors of student academic performance success.

Research Questions

While accounting education research is abound with studies investigating predictors of student performance in first-year university accounting and economic courses, many of these are from a developed country context. There has been a lack of notable Samoan literature that has studied the factors which influence students' academic success at foundation or tertiary level. Hence, this study looks firstly at prior academic performance at PSSC as a predictor of current academic performance in Foundation accounting and economics and secondly, at gender-based performance differences in accounting and economics courses by examining the differences at PSSC and foundation levels for the period 2001 to 2007. Guiding the investigation were the following focus questions:

1) Are students' academic performance in the PSSC English, mathematics, accounting and economics useful in predicting successful performance in Foundation accounting and economics?
2) Is there any gender based differences in the performance of students at PSSC and Foundation levels in accounting and economics for the period 2001 to 2007?

Course marks for foundation accounting and foundation economics are based on the final examinations and the instructors' assessment of the students' achievement in internal assessments which is made up of a variety of activities such as assignments, presentation and tests. Similarly, the PSSC results are made up of two components which consist of the final examination marks and internal assessment marks.

Methodology

For the purpose of this study, prior academic performance was assessed using the 2000–2007 PSSC final results. The PSSC final results were correlated with the 2001 to 2007 foundation commerce level results. Admission to the foundation commerce level is selective and based on prior achievement of the PSSC commerce subjects, accounting and economics, with the inclusion of the compulsory subjects of English and mathematics. PSSC English and mathematics were also included on the basis that there have been research which have considered performance in secondary level mathematics and English as possible predictors in performance of students in foundation accounting and economic courses.

The population for this study included students enrolled in the NUS foundation commerce program upon successful completion of PSSC at Year 13 (PSSC aggregate of 15 or better in English and best three subjects) and completed a full first semester in accounting and economics for the periods 2001 – 2007. Such subject enrolments were in the range of 90 to 200 and the pooled data involved approximately 200 observations for each year. Data sources used in this study included the NUS 2001 to 2007 FOBE students' results and the 2000 to 2006 PSSC students' results. Data was extracted for students' final marks awarded in the foundation accounting and economics subjects and the PSSC final marks for accounting, economics, English and mathematics for the relevant periods. The relationships between foundation academic performance in accounting and economics subjects and prior academic achievement in PSSC mathematics, PSSC English, PSSC accounting and PSSC economics were analyzed.

Statistical relationships were measured and investigated for each of the relevant subjects, using appropriate statistical methodology. Regression models were developed initially using data from the 2001 cohort, for which full foundation academic results were available, to enable a preliminary analysis of the significant explanatory factors of the four PSSC subject marks (Maths, English, Economics and Accounting). Students' foundation marks in accounting were regressed against secondary school PSSC Accounting, Economics, English and Mathematics marks to determine how significant school achievement is in determining foundation academic performance. Subsequently, students' foundation marks in economics were also regressed against the relevant secondary PSSC marks for the same purpose. For inferential analysis, a general descriptive analysis was performed on the sample data.

Similar models were estimated for the corresponding 2001 to 2007 entry cohorts and the relevant PSSC subject final marks were regressed against the relevant foundation subject marks to determine how significant these are in determining the variation in students' foundation academic performance. Regression models were also developed using data from the 2001 -2007 cohort, to enable the analysis of the effects of gender. Gender performance differences were identified using descriptive statistics for both foundation accounting and foundation economics in individual periods. Linear regressions were estimated using the program "R". "R" is a specialized statistical software package which was used to streamline the analytical process.

In summary, the five main predictor variables used in regression analysis to predict performance in foundation accounting and economics were PSSC Accounting, Economics, English, Mathematics and gender.

Results and Discussion
Prior knowledge as predictors of academic performance
Pair plots of the data (refer Figure 1) below indicate that correlations exist between students' marks in Foundation accounting (FACC) and Foundation economics (FECO) with their PSSC marks in English, mathematics, accounting and economics.

Figure 1: Pairs plot to establish if there is a dependency of performance in foundation accounting and economics to prior PSSC knowledge of Accounting, Economics, English and Mathematics
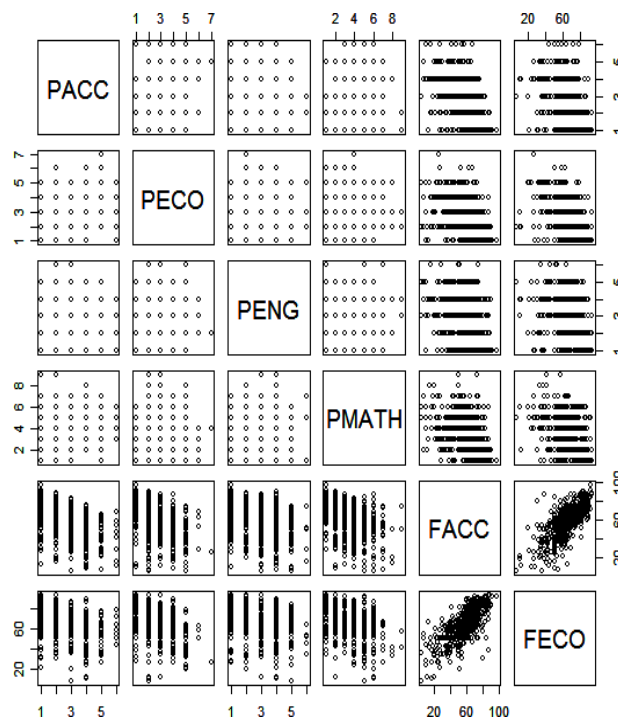
Foundation Accounting
The regression models 1- 4 (refer to Appendix 1) showed that all four variables were highly significant, therefore, indicating that all PSSC results are good predictors for students' performance in FACC across the 2001–2007 periods. All the variables are positively correlated indicating that having a good prior knowledge of the four subjects at PSSC level will give students a good chance of doing well in FACC. Moreover, PSSC accounting appears to have a greater effect than the other 3 subjects, while mathematics appears to have the least effect on FACC. These results are in contrast to Keef (1991) who found performance at university entrance level accounting to be positively related to the previous study in economics and mathematics and independent of previous accounting studied at secondary school.

According to Model 4 (refer to Appendix 1), a greater effect for PSSC English as compared to PSSC mathematics can be established when PSSC economics is dropped out of the model. The discrepancy here is that although all the variables are highly significant predictors, the coefficient of the correlation is very small (only 0.3412 for the Full Model). As indicated below, closer inspection of the data (use of box plots) indicate the presence of outliers (extreme scores) thus leading to wide variability.

Foundation Economics
Similar to the results for FACC, models 5 to 8 (refer to Appendix 2) showed that all variables were highly significant and therefore are all considered good predictors for students' performance in FECO. Subsequently, all are positively correlated therefore indicating that having good prior knowledge of

the four subjects at PSSC level will give students a good chance of doing well in FECO. In addition, PSSC economics has a greater effect than the other PSSC subjects with English having the least effect.

Model 4 (refer to Appendix 1) also shows a greater effect for PSSC mathematics compared to English when accounting is dropped out of the model. Once again, the same discrepancy arises whereby there is a small coefficient of correlation (only 0.3721 for the Full model) while all the variables are highly significant predictors of performance in FECO.

Diagnostic plots were also created to investigate the small correlation coefficients in both FACC and FECO. Figures 2 and 3 below show the results for the Normal QQ plots. Both figures indicate a number of influential points and outliers being present. Such points indicate cases which give the total reverse of the established relationships above.

Figure 2: Diagnostic plot for accounting fitting
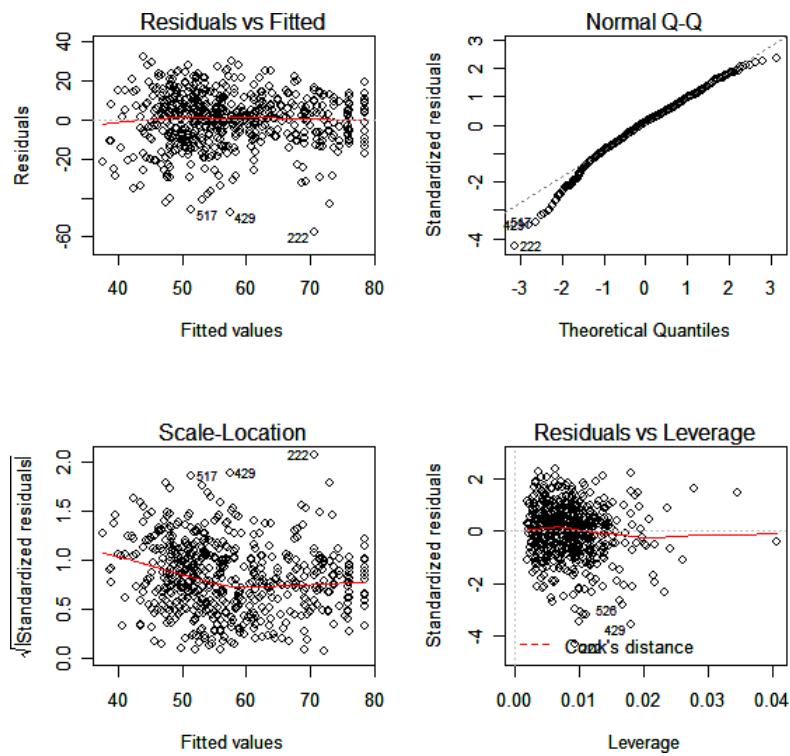
Figure 3: Diagnostic plot for economic fitting
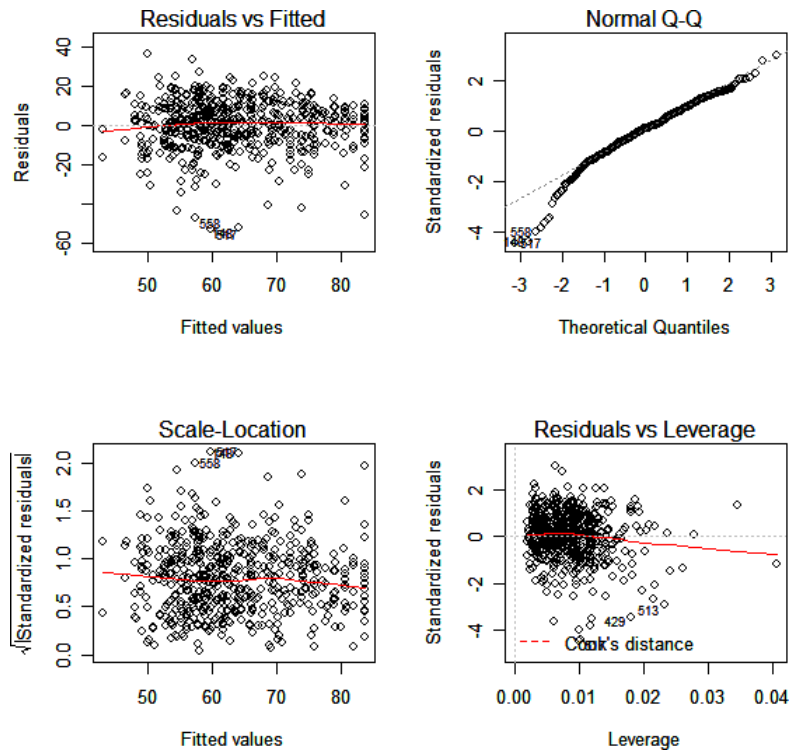
These extreme scores or outliers are the cause of the reduction to the correlation coefficients for the models. A better and more representative model can be obtained by the removal of these cases of influential points and outliers.

Gender

Table 1 shows the statistics for performance in foundation accounting and foundation economics according to gender. With the exception of the year 2002, the proportion of females who have completed both foundation courses is very high. After the year 2002, the performance differences between the number of female students and male students appear to increase.

Table 1: Yearly performance measured by the means and standard deviation in both courses by Gender

Year	Statistics	Accounting Male	Accounting Female	Economics Male	Economics Female
2001	Mean	65.40	69.03	71.30	78.03
	St. deviation	11.73	11.71	10.94	12.50
2002	Mean	56.50	60.15	63.38	64.30
	St. deviation	15.67	12.35	16.04	11.82
2003	Mean	48.14	48.95	58.34	60.46
	St. deviation	16.80	15.42	13.59	12.56

2004	Mean	56.33	61.83	62.67	63.43
	St. deviation	21.71	13.28	25.28	15.57
2005	Mean	60.36	58.31	63.84	63.05
	St. deviation	17.72	15.08	11.22	12.76
2006	Mean	52.35	55.95	61.45	60.64
	St. deviation	14.97	14.38	15.82	11.99
2007	Mean	56.35	52.36	60.80	55.27
	St. deviation	24.79	22.73	18.06	20.30

Data on correlation between performance of students and gender in individual years are also shown in Figure 4 to Figure 11 in Appendix Four. These figures also reaffirm the results shown in Table 1 whereby generally female students performed better in both economics and accounting overall than male students.

The annual means for performance in foundation accounting for the period 2001 to 2007 are shown below. According to Figure 12, female students performed better by achieving higher mean marks than male students for the period 2001 to 2007 but with the exception of 2005 and 2007.

Figure 12: Gender comparison of the performance in foundation accounting
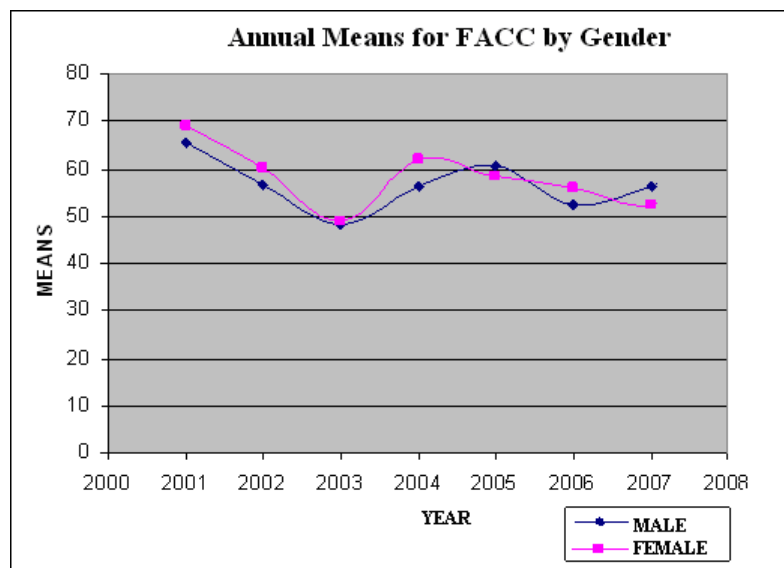
The annual means for performance in foundation economics for the period 2001 to 2007 is also shown below. The results of the performances by gender in foundation economics are exceptionally similar to the results for foundation accounting.

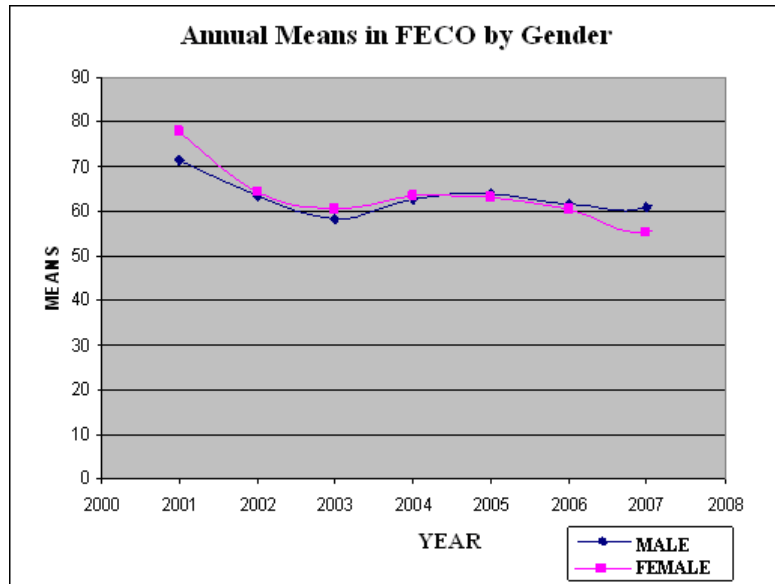**Figure 13: Gender comparison of the performance in foundation economics**

Figure 13 above show that female students also outperformed the male students in foundation economics for the period 2001 to 2004. Male students' performance improved after the 2005 period and continued to perform slightly better than female students. Similarly, this may have been caused by the increase in the number or female students enrolled in the foundation economics course. As indicated by the box plots in Figure 14 (refer to Appendix 4), the differences in gender performance is slightly more pronounced for foundation accounting than foundation economics.

Summary of Findings
In summary, the findings from the study are shown below and grouped according to the two focus questions:

1)   Are student performances in PSSC English, Mathematics, Accounting and Economics useful in predicting successful performance in foundation Accounting and Economics?
       Results of the study indicate the following:
     a.   All PSSC results in English, Mathematics, Accounting and Economics are good predictors for students' performance in Foundation Accounting across the 2001 to 2007 periods. All the variables are positively correlated indicating that having a strong prior academic performance in the four subjects at PSSC level will give students a good chance of doing well in Foundation Accounting. Moreover, PSSC Accounting appears to have a greater effect than the other three subjects, and PSSC Mathematics appears to have the least effect on foundation accounting.

b. All four predictor variables are highly significant and therefore are all considered strong predictors for students' performance in Foundation Economics. All are positively correlated indicating a strong prior academic performance in the four subjects at PSSC level will give students a good chance of doing well in foundation economics. In addition, PSSC economics has a greater effect than the other PSSC subjects with PSSC English having the least effect.

2) Is there any gender based differences in the performance of students at PSSC and Foundation levels in accounting and economics for the period 2001 to 2007?

In terms of gender, female students performed better overall by achieving higher average marks than male students in foundation accounting for the period 2001 to 2007, with the exception of 2005 and 2007. Female students also outperformed male students in Foundation Economics for the period 2001 to 2004. However, male students' performance in foundation economics improved after the 2005 period and continued to perform slightly better than female students.

Conclusion

It has been shown in prior literature that students' academic performance success is influenced by different factors (for example, Abhayawans et al. 2012; Beatson et al., 2020; Jackling and Anderson 1998; Koh and Koh 1999; Papageorgiou and Halabi, 2014). The main purpose of this study is to understand the influence of prior learning experiences and gender on students' academic success by comparing secondary exam scores with foundation-level exam scores in the disciplines of Accounting, Economics, English and Maths, for the period 2001 to 2007. The results of the study are consistent with previous studies (Abhayawans et al. 2012; Alcock et. al 2008; Byrne and Flood, 2008; Duff 2004; Papageorgiou and Halabi, 2014) which indicated a positive correlation between prior academic performance in individual disciplines and current academic performance for students in accounting and economics. The analysis indicates that the four secondary (PSSC) performance indicators in the subjects of Accounting, Economics, English and Mathematics are all strong predictors of students' performance in foundation accounting and foundation economics.

In terms of the impact of gender on academic performance, the findings for this study are consistent with the studies done in Australia (Auyeung and Sands, 1993; McKenzie and Scheweitzer, 2001; Win and Miller, 2005). Similar to the results from Nouri and Domingo (2019), this study found that female students generally performed better than male students in both Introductory Accounting and Economics disciplines. The gender performance difference is slightly less notable in Foundation Economics than Foundation Accounting as indicated by the means.

Limitations

The current study is based solely on administrative data. It is recommended that in future that this study is supplemented and accompanied by a student attitudinal survey which evaluates student perceptions on such aspects as difficulty of course, and issues and challenges. Such additional information will provide a more holistic view of the Foundation Commerce program at NUS.

Implications and Recommendations

The investigation of factors relating to the academic performance of students is a key concern for educators in Samoa. This study makes an important contribution to the limited literature on the importance of prior secondary school performance and gender for determining current student academic performance in Samoa. By examining these factors in a new setting, this study contributes to the knowledge base in accounting education (Stout and Rebele, 1996). The findings of this study will therefore help accounting educators understand the impact of these variables on students' academic performance success.

The outcomes and findings from this paper provides important data on factors affecting student academic performance in Foundation accounting and economics. The results have indicated that prior ability in English and Mathematics are strong predictors of performance in both Foundation accounting and economics. However, it must be emphasized that the findings apply only within the educational setting of the NUS and cannot be generalized beyond these settings.

This study also provides an encouragement to students, academics, schools and the wider community that students with a range of achievement at Secondary Schools can and do succeed in academically demanding courses in higher education. It is hoped that the present findings may be used to inform teaching interventions and also to form a basis for future research in academic performance of students in both secondary and tertiary levels in Samoa.

As a study investigating the determinants of success in accounting and economics, the findings from this work have implications for accounting educators working on increasing their teaching effectiveness in accounting and economic courses. Implications include identifying at-risk students on the basis of their prior academic performance as well as their pre-determined personal variables. This will assist with the evaluation of the potential effectiveness of potentially controllable variables such as grading policy, assignments, teaching style, course contents and counseling. This study's findings have important implications for designing curricula and assessment for accounting courses to cater for students, for university lecturers to adopt an inclusive approach, and for higher education access policies.

From the findings of this study and taking into account the limitations of this study, the following recommendations are made:
a.   Strong prior mathematics and English performances should be prerequisites for the enrolment of students into the Foundation commerce program.
b.   Results of this research can provide solutions in improving the course and can also use to pursue for further studies in the future.
c.   This research is part of an ongoing long-term study on accounting education in Samoa. The findings from this study provide the foundation for further investigation to obtain a greater depth of information evaluating student academic performance using qualitative methods. Questionnaires and interviews can elicit greater information regarding students' knowledge and attitudes by providing insights into the students' perceptions and experiences.

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Appendices

Appendix 1: Models fitted in R

Model 1: Fitting FACC with ALL

Call: lm (formula = FACC ~ ac + ec + eng + ma)

Coefficients:

Estimate Std. Error t value Pr (>|t|)

(Intercept) -5.57378 3.83118 -1.455 0.146250

ac   0.42505   0.05096 8.341 5.33e-16 ***

ec   0.19628   0.05374 3.652 0.000284 ***

eng   0.15951   0.04827 3.304 0.001010 **

ma   0.15230   0.03826 3.981 7.74e-05 ***

Residual standard error: 13.55 on 583 degrees of freedom

Multiple R-Squared: 0.3412, Adjusted R-squared: 0.3367 F-

statistic: 75.5 on 4 and 583 DF, p-value: < 2.2e-16

Model 2: Fitting FACC with ALL but Maths

Call: lm (formula = FACC ~ ac + ec + eng)

Coefficients:

Estimate Std. Error t value Pr (>|t|)

(Intercept) -1.53492 3.74104 -0.410 0.681742

ac   0.48773   0.04908 9.938 < 2e-16 ***

ec   0.20601   0.05437 3.789 0.000167 ***

eng   0.16361   0.04887 3.348 0.000867 ***

Residual standard error: 13.72 on 584 degrees of freedom

Multiple R-Squared: 0.3233, Adjusted R-squared: 0.3199 F-

statistic: 93.02 on 3 and 584 DF, p-value: < 2.2e-16

Model 3: Fitting FACC with ALL but English

Call: lm (formula = FACC ~ ac + ec + ma)

Coefficients:

        Estimate Std. Error t value Pr (>|t|)

(Intercept) -0.47633 3.53653 -0.135 0.893

ac   0.43695   0.05126 8.524 < 2e-16 ***

ec   0.26257   0.05028 5.222 2.46e-07 ***

ma   0.15500   0.03858 4.018 6.64e-05 ***

Residual standard error: 13.66 on 584 degrees of freedom

Multiple R-Squared: 0.3289, Adjusted R-squared: 0.3255 F-

statistic: 95.41 on 3 and 584 DF, p-value: < 2.2e-16

Model 4: Fitting FACC with ALL but economics

Call: lm (formula = FACC ~ ac + eng + ma)

Coefficients:

        Estimate Std. Error t value Pr (>|t|)

(Intercept) -2.28783 3.76316 -0.608 0.543

ac   0.50325 0.04673 10.770 < 2e-16 ***

eng   0.22532 0.04525 4.979 8.43e-07 ***

ma   0.15865 0.03862 4.108 4.57e-05 ***

Residual standard error: 13.69 on 584 degrees of freedom

Multiple R-Squared: 0.3262, Adjusted R-squared: 0.3227 F-

statistic: 94.23 on 3 and 584 DF, p-value: < 2.2e-16

Appendix 2

Model 5: Fitting FECO with ALL

Call: lm (formula = FECO ~ ac + ec + eng + ma)

Coefficients:

         Estimate Std. Error t value Pr (>|t|)

(Intercept) 4.03334 3.38162 1.193 0.2335

ac   0.20194   0.04493 4.495 8.40e-06 ***

ec   0.38850   0.04739 8.198 1.57e-15 ***

eng   0.10597   0.04261 2.487 0.0132 *

ma   0.18737   0.03374 5.554 4.26e-08 ***

Residual standard error: 11.94 on 582 degrees of freedom

Multiple R-Squared: 0.3721, Adjusted R-squared: 0.3678 F-

statistic: 86.24 on 4 and 582 DF, p-value: < 2.2e-16

Model 6: Fitting FECO with ALL but Maths

Call: lm(formula = FECO ~ ac + ec + eng)

Coefficients:

         Estimate Std. Error t value Pr (>|t|)

(Intercept) 8.98251 3.34453 2.686 0.00744 **

ac   0.27899   0.04381 6.368 3.89e-10 ***

ec   0.40056   0.04854 8.253 1.04e-15 ***

eng   0.11125   0.04368 2.547 0.01112 *

Residual standard error: 12.25 on 583 degrees of freedom

Multiple R-Squared: 0.3389,   Adjusted R-squared: 0.3355

F-statistic: 99.61 on 3 and 583 DF, p-value: < 2.2e-16

Model 7: Fitting FECO with ALL but English

Call: lm (formula = FECO ~ ac + ec + ma)

Coefficients:

        Estimate Std. Error t value Pr (>|t|)

(Intercept) 7.43196 3.10691 2.392 0.0171 *

ac   0.20986   0.04501 4.662 3.88e-06 ***

ec   0.43232   0.04419 9.784 < 2e-16 ***

ma   0.18924   0.03388 5.586 3.57e-08 ***

Residual standard error: 12 on 583 degrees of freedom

Multiple R-Squared: 0.3655,   Adjusted R-squared: 0.3622

F-statistic: 111.9 on 3 and 583 DF, p-value: < 2.2e-16

Model 8: Fitting FECO with ALL but accounting

Call: lm (formula = FECO ~ ec + eng + ma)

Coefficients:

        Estimate Std. Error t value Pr (>|t|)

(Intercept) 8.14285 3.30887 2.461 0.01415 *

ec   0.47801   0.04371 10.937 < 2e-16 ***

eng   0.11955   0.04320 2.767 0.00583 **

ma   0.23419   0.03261 7.181 2.12e-12 ***

Residual standard error: 12.14 on 583 degrees of freedom

Multiple R-Squared: 0.3504,   Adjusted R-squared: 0.347

F-statistic: 104.8 on 3 and 583 DF, p-value: < 2.2e-16

Figure 4: Overall performance in both course by gender for 2001–2007

Overall Performance in FACC and FECO by Gender
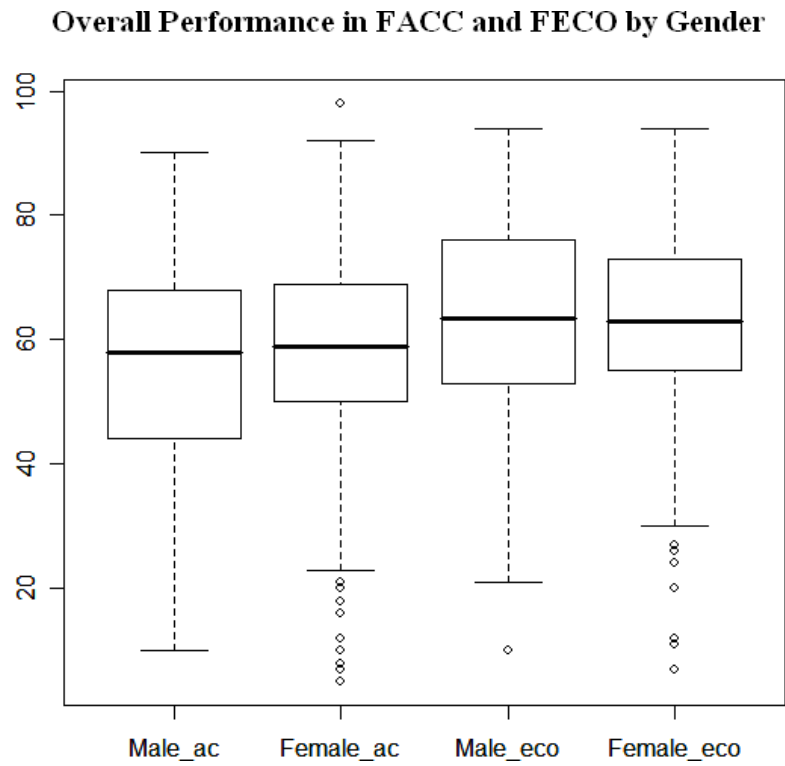
Figure 5: Performance in both course by gender in 2001

Performance by Gender in 2001

Figure 6: Performance in both course by gender in 2002

Performance by Gender in 2002

Figure 7: Performance in both course by gender in 2003

Performance by Gender in 2003

Figure 8: Performance in both course by gender in 2004

Performance by Gender in 2004

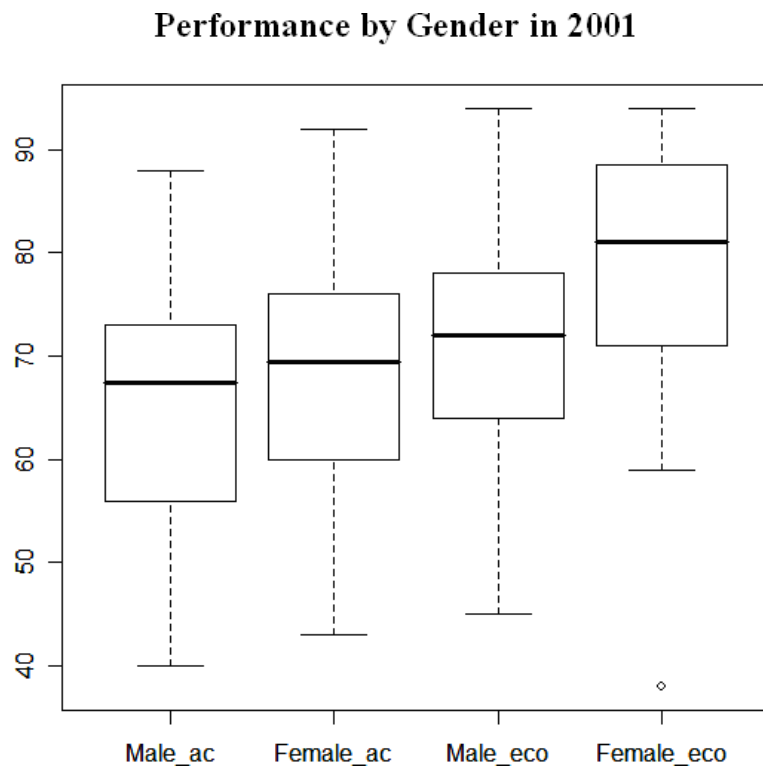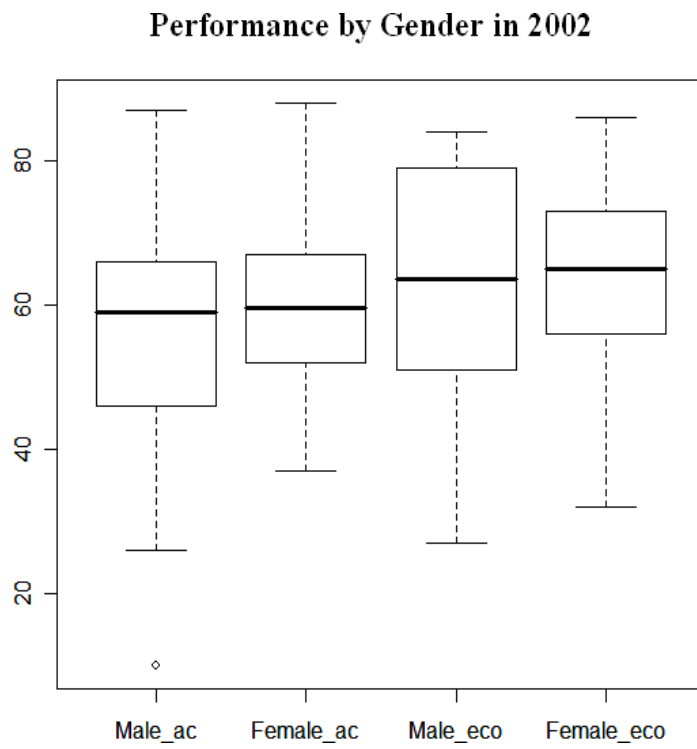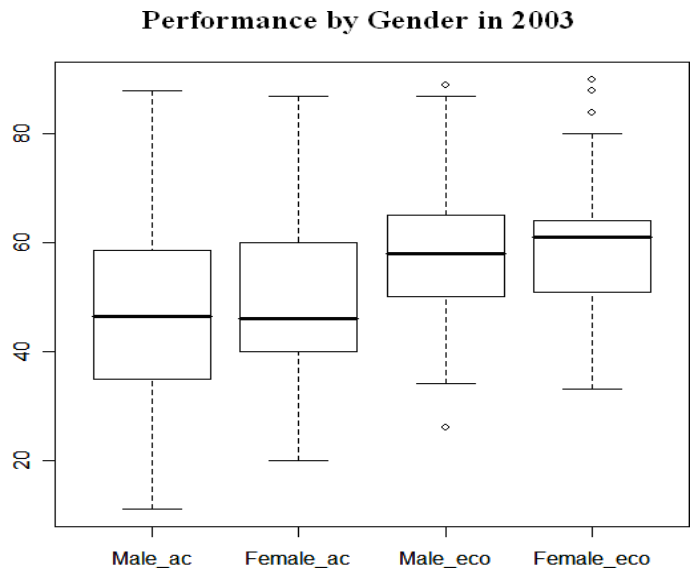**Figure 9: Performance in both course by gender in 2005**

Performance by Gender in 2005

Figure 10: Performance in both courses by gender in 2006

Performance by Gender in 2006

Figure 11: Performance in both course by gender in 2007

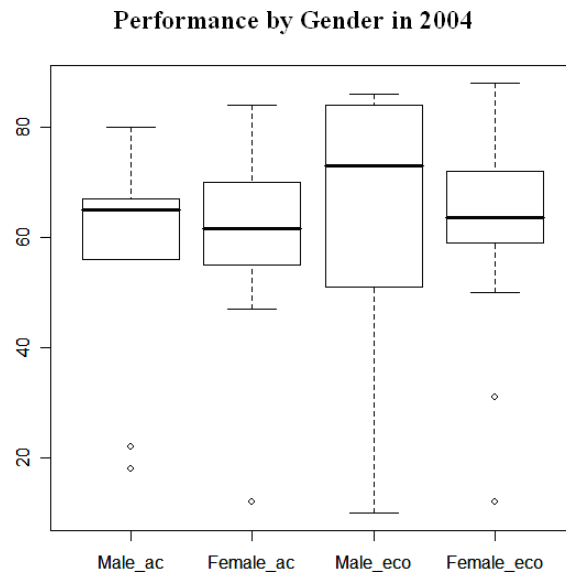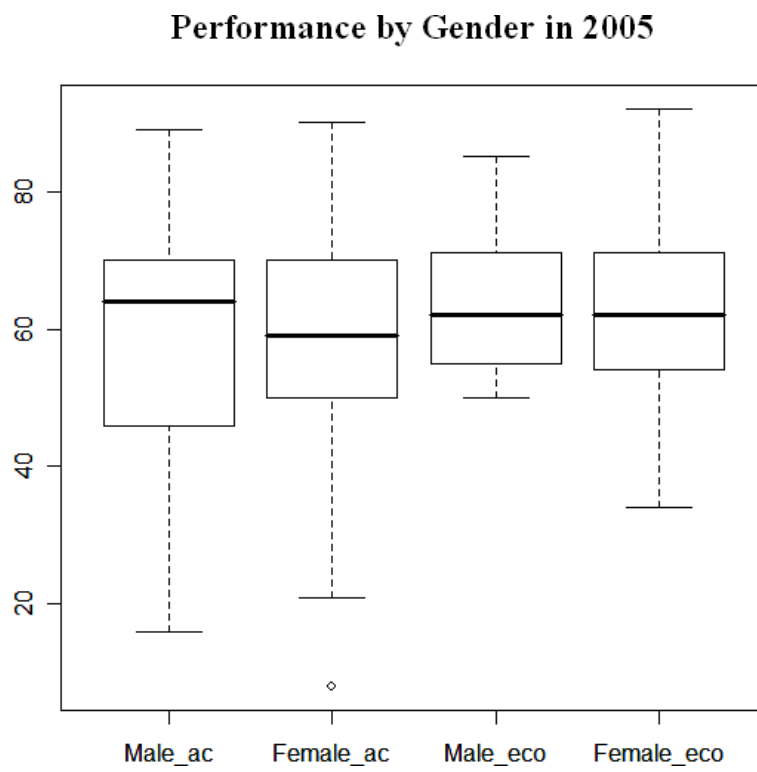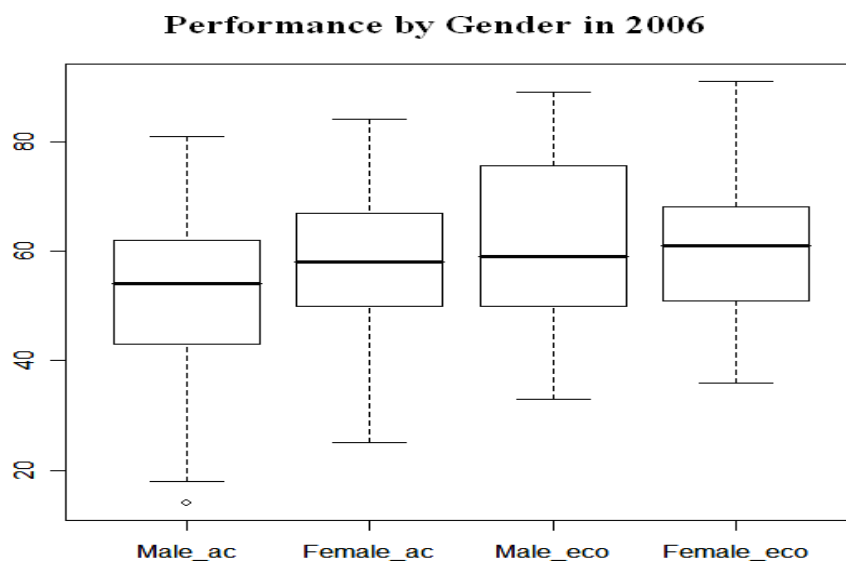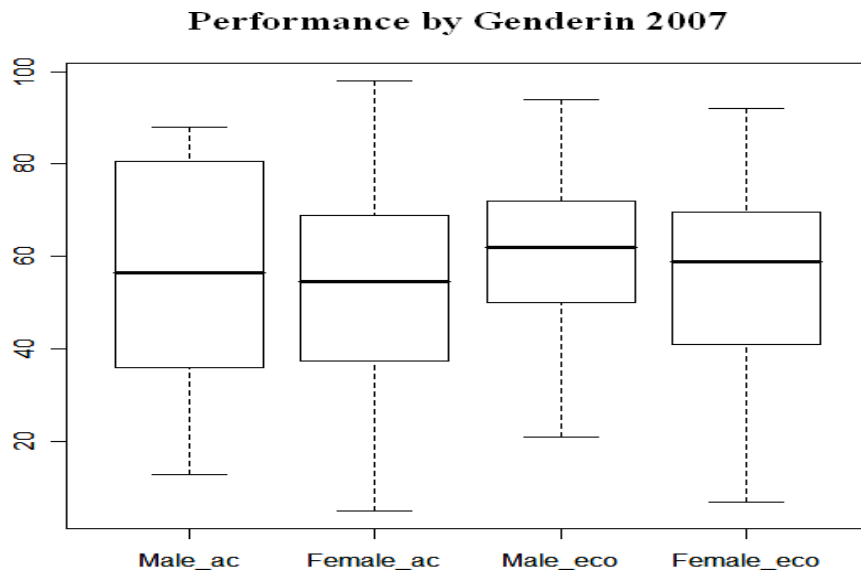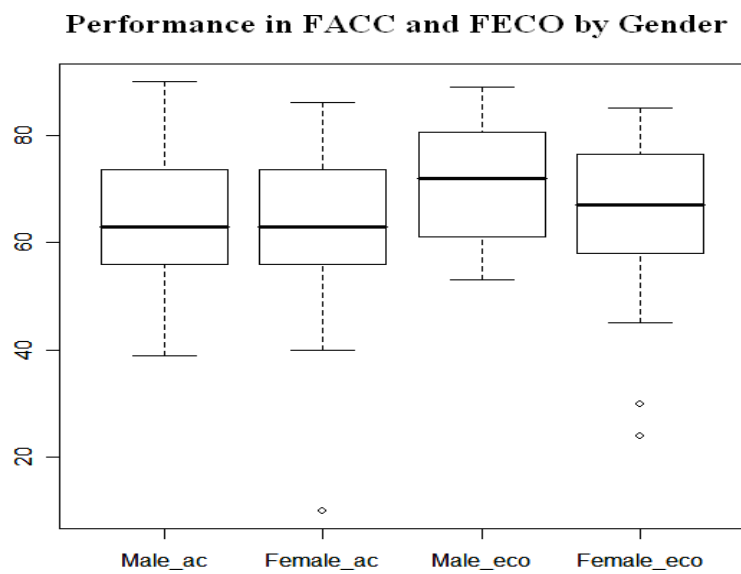Performance by Gender in 2007

Figure 14: Performance in FACC and FECO by Gender for the period 2001–2007

Accounting Development in Samoa: An Institutional View

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Abstract

This paper explores and synthesizes the development of accounting in Samoa and the possible motivations for accounting from the perspective of institutional theory. The motivation for this paper is a belief that a focus on institutional theory will help to produce a better defined theory for scholars to accumulate knowledge about the development of accounting. It considers the possible development of accounting in relation to three pillars: regulatory, normative and cognitive institutions. To explore the development of accounting, an archival documentary review of pertinent reports and legislations was employed for the data collection. The findings lead to an understanding of the development of accounting in two institutional contexts involving (i) direct regulatory pressures (including international reporting standards and aid donor requirements) and (ii) accounting profession (conformance with CPA). The differences between these institutional influences on accounting development are discussed to provide insights into the development of accounting in Samoa for policy makers, academics and the accounting profession.

Keywords: *accounting development, institutional theory and accounting profession.*

Introduction

Research into the development of accounting for developing countries has received little attention from academics in accounting and development studies. An understanding of the factors contributing to the development of accounting is required to facilitate an environment where accounting practices are developed to meet the demand of individual countries. This understanding is particularly relevant to countries that are in the process of transitioning their accounting systems to meet those demands. The development of accounting in a country will depend on a myriad of factors, which are often mismatched and misinterpreted. In most cases, the accounting ideologies and practices of the West are not easily adopted by developing countries because of factors relating to governance, interest groups and culture.

In the case of Samoa, culture has been identified as a barrier to the development of accounting. The collectivists' nature of the *FaaSamoa* (Samoan way), clashes with the individualistic accounting ideologies brought upon by the West. Culture plays a significant role in accounting development; however, there are pressures from external parties to align accounting systems with internationally accepted accounting regulation and practices. These pressures are imposed locally by foreign aid donors, multinational corporations and other parties. The need therefore arises for a proper analysis of the motivations for the development of accounting in Samoa, in order to provide some context in this area.

A more complete explanation requires an understanding of how developments in accounting and regulation emerge and change, given the social and institutional historical background of the developing countries in transition. Furthermore, the adoption of Western ideologies and accounting practices in Samoa raises a consequent and related question of how and why local accounting regulations have undergone a transition to become analogous to the International Accounting Standards (IASs). The research analyses the development of accounting in Samoa through an institutional lens and aims to identify the influences that are contributing to the development of accounting in a local context for policy makers, academics and the accounting profession.

Literature Review

Research has indicated that there are different patterns of accounting development and that the development of accounting tends to be a function of different factors. Studies have indicated that the

identification of these patterns and influential factors involved is a matter of controversy (Mueller, 1967; Zeff, 1972; Radebaugh, 1975; Nair and Frank, 1980; Nobes, 1983). The existing literature in this area looks at the different aspects of accounting, analyzed through different contexts and varying theories.

Uche (2002) applied the Weberian concept of social closure to investigate the development of the accounting professions in Nigeria and found that the type of government in place, societal expectations, interest groups and government actions have impacted on the development of the accounting profession. From a different conceptual view, studies have indicated that institutional theory provides deeper insights into the institutional context of accounting systems (Fogarty, 1992; Covaleski et al., 1993; Scapens, 1994; Covaleski et al., 1996; Carpenter and Feroz, 1992, 2001). Some studies have focused mainly on managerial accounting (Lapsley, 1994; Abernethy and Chua, 1996; Etherington and Richardson, 1994; Hoque and Alam, 1999), while others have emphasized financial accounting in capitalist economies (Fogarty, 1992; Carpenter and Feroz, 1992, 2001; Touron, 2005). Hassan (2008) used institutional notions of coercive, mimic and normative isomorphic mechanisms to relate the changes in the financial accounting regulations, to the changes in the wider social and institutional context of Egypt. The findings from Hassan (2008) found that the catalyst to the formulation of national accounting standards was influenced by the major changes in the state's political philosophy, the regulators' motivations and the accounting profession processes.

Literature from a regional perspective offers insight into accounting within the Fijian context (see Alam et al., 2004; Chand and Patel, 2008; Davie, 2000a, 2000b, 2005; Irvine and Deo, 2006; Rika et al., 2016; Sharma et al., 2010, 2012). Sharma and Samkin (2020) analysed the development of accounting in Fiji and partitioned their research into four distinct time periods for analysis – Pre-colonial (1801 - 1873), Colonial (1874 – 1970), Fiji as a dominion under the 1970 Constitution (1971 – 1986) and Fiji as a Republic following the 1987 coups (1987 - 2016). The findings from their research revealed that during pre-colonial times, accounting was used to facilitate transactions between commodity exporters and those charged locally with the oversight of capital. Additionally, early practices of accounting lead to the development of what is known as the 'American debt' and subsequently resulted in the colonization of Fiji by the British Empire. The British occupation led to a drastic increase in demand for accounting expertise, to accommodate the rapidly changing economic conditions motivated by the exploitation of local commodities (e.g. cotton, sugar, crops) and introduction of taxes by the imperial power (Sharma and Samkin, 2020). Fiji gained its sovereignty in 1970, but remained a dominion of the British Empire. Fiji's self-governance increased the demand for qualified accountants in both commercial businesses and government. These pressures led to the establishment of a formal association of accountants through the Fiji Institute of Accountants (FIA) Act 1971. The Fiji Institute of Accountants (FIA) evolved to have greater regulatory power over the accounting standards and frameworks used in local financial reporting. The influence of external financing and aid organizations contributed extensively to the development of accounting through the coercive adoption of International Accounting Standards in Fiji (Sharma and Samkin, 2020). The 1987 coups in Fiji did not have a direct impact on the development of accounting. The formal provisions earlier implemented remained unchanged. The political turmoil from the coups decimated the local economy and political stability within the country, however, accounting practices continued to develop. External pressures from international accounting firms, multinational corporations and international financial agencies led to the adoption of International Financial Reporting Standards (IFRS), or equivalent versions under the Fiji Accounting Standards (FAS). The IFRS did not consider local circumstances, which often lead to accounting provisions that were inconsistent with the local customs and culture; however, this was mediated by revising IFRS to accommodate local practices, as done through FAS.

Chand and White (2007) critically analyzed the factors influencing the adoption of International Financial Reporting Standards in Fiji and identified the major stakeholders who would benefit from its

adoption. Chand and White (2007) concluded that the harmonization of accounting standards served the interests of the nations affiliated with the International Accounting Standards Board, multi-national corporations and the Big 4 accounting firms. These parties are also the primary forces influencing the development of accounting regulation and practices in Fiji.

Accounting literature pertaining to the development of accounting in Samoa is limited. The *FaaSamoa* is a unique and often difficult matter to understand. The principles of the *FaaSamoa* are intricately woven into how its people carry out daily tasks, be it in a professional or informal setting. The 'faamatai' system is a hierarchical system that bestows 'matai' titles on to family members as a mark of recognition and respect (Iati, 2007). The *FaaSamoa* is based on the principles of *faaaloalo* (respect), *alofa* (love) and *aiga* (family) (Tamasese, 2009). The doctrines of the Samoan culture establish a precedent of collectivism and conflicts with the individualistic ideologies of adopted accounting practices (namely the International Financial Reporting Standards).

Masoe (2010) examined the influence of the *FaaSamoa* on accountability in the accounting profession and supported the idea that Samoa's collectivists culture, heavily affected the adoption of Western accounting ideologies and practices. Perera, Cummings, and Chua (2012) further supported the notion that a country's accounting profession is a product of its environment, and that Samoa's culture and values will contribute perversely to its development. Masoe and Prescott (2011) analyzed the development of accounting through the Embeddedness theory and concluded that the individualistic ideologies of the West often clash with Samoa's collectivist culture, but its development is further influenced by internal and external factors. Ioane (2014) applied institutional theory to identify changes in the Samoan environment that influenced the role of the Samoa Institute of Accountants (SIA). Her research identified the difficult dynamics within the association of accountants, and how reluctant members are to treat those with higher cultural backgrounds to the same degree as those who lack cultural standing, when matters of professional and ethical conduct are raised.

From the literature review, research on identifying the patterns or factors influencing accounting development in developing countries is scarce. While there have been studies addressing the development of accounting in developed countries, little is known about this topic within the Pacific region. More specifically, few studies have explicitly drawn upon the institutional theory isomorphic mechanisms and social legitimacy in order to examine the accounting development within a developing country context. This study contributes to the literature by exploring and synthesizing the development of accounting in Samoa and the possible motivations for accounting from the perspective of institutional theory in order to assist academics with future research and professionals in practice.

Institutions and Institutional Change

This study adopts the institutional theory to understand the development of accounting in Samoa. The extant literature has established that the institutional framework operates to understand influences on both international and organizational structures (Tuttle and Dillard, 2007). Institutional theory explains how social rules, norms and routines become well-developed as authoritative guidelines and how such rudiments are produced, adopted and established over time (Scott, 2004). Institutional theory is considered appropriate when one is seeking to explain organizational, administrative and accounting practices and development (Dancin et al., 2002; Osinubi, 2020; Tolbert and Zucker, 1983).

Hamilton (1932:84) defined and considered institutionalism as 'a way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people'. This notion emphasizes the importance of habitual behavior and considers 'institutions' as imposing form and social coherence upon human activity, partly through the continuing production and

reproduction of habits of action and thought (Scapens, 1994:306). Scott (2001) refers to the concept of 'institutions', as the systems of social beliefs (e.g. education, laws, politics and regulations) and socially organized practice behind every society. Accordingly, institutions are noted as 'social structures that have attained a high degree of resilience … Social structures include norms, values, expectations, procedures, standards and routines' (Scott, 2001:148).

Scott (2001) contended that social norms, rules and values are not the primary element of institutions as it is in human activities that such norms and procedures can be produced and reproduced. As purported by Zucker (1991), the process of producing meaningful behavior, connotes the process of institutionalism. It is through institutionalism that activities which comply with social rules and norms become socially accepted as 'right' or 'proper', or perceived as the only 'conceivable reality' (Oliver, 1996:166).

These social rules and norms have affected organizations - as the social actors and the 'carriers' of social structures (DiMaggio and Powell, 1983) - over time. Social rules and norms permeate the organization through influencing people in the organization, the groups it exemplifies, the vested interests it has created and the way it has adapted to its environments (Selznick 1957). Therefore, the process of institutionalization is where organizations are bounded and assessed by powerful state or institutional criteria, so that they can construct narratives of their actions that resemble socially prescribed mandates about what the organization can positively pursue and what it cannot (Meyer and Rowan, 1977). In complying with social rules and norms, organizations can be considered by society as legitimate and therefore, can exist and survive by maintaining such legitimacy.

Development of Accounting and the Institutional Context

An understanding of the history in the accounting profession is critical to analyzing the development of accounting in developing countries, such as Samoa. The accounting profession has an extensive and controversial history. The earliest records would indicate that the profession was established somewhere in the 1850's in the United Kingdom (Willmott, 1985). Initially, accounting bodies were designed to meet the growing demand from the market and changes in the environment from increased investments and globalization (Zeff, 2003). The history of accounting is well researched in extant literature, however, very limited with regard to developing countries. Gray (1988) maintained that the development of accounting, both in profession and practice, was influenced by colonial rule. During these colonial times, accounting principles, governance ideologies and systems were imposed upon the colonies. The countries, who have so far gained sovereignty, continue to mould and model their systems based on the principles introduced by former colonial powers.

In the case of Samoa, the introduction of accounting education was made during the New Zealand administration. Accounting professionals, Ministers and Priests introduced the topic of bookkeeping in local high schools. This was the beginning of accounting development in Samoa. The need for qualified accountants became increasingly apparent with the development of local trade. This resulted in the formation of the very first accounting body, the Western Society of Accountants (WSSA), by New Zealand accounting professionals and a few locals (Masoe and Prescott, 2011). The introduction of formal accounting education by WSSA reaffirmed the importance of having qualified accountants who are capable of meeting the growing demand for accounting services. The 1980's saw one of the largest international accounting firms, Price Waterhouse Cooper (PWC), establish a branch in Samoa. PWC provided study workshops, formal qualifications and mentor programs to assist interested individuals in joining the accounting profession. The National University of Samoa (NUS) created a formal qualification to assist individuals who wish to study accounting in 1984. The 1990's brought upon a rebranding of the WSSA, to the Samoa Society of Accountants (SSA). The requirements to join the SSA, were essentially modelled and designed by the New Zealand Institute of Chartered Accountants, and were administered by qualified chartered accountants (Masoe and Prescott, 2011).

In more recent times, the introduction of the Samoa Institute of Accountants (SIA) Act 2006, reinforced and reaffirmed the roles, responsibilities and functions of the newly formed, Samoa Institute of Accountants (SIA). This act replaced the Public Accountants Act 1984 that previously established the former association of accountants, the SSA. The act aimed to establish a working relationship between SIA and the Ministry of Revenue, intended to aid the development of accounting, specifically tax and audit. The SIA remains the overarching accounting body in Samoa, but often works in close collaboration with CPA Australia for the material required in member accreditation and qualifications (Ioane, 2014).

As a developing country, reliant on bilateral aid and transnational development assistance, Samoa's development have been predominantly influenced by bilateral aid partners, donors and transnational development institutions, namely the World Bank, United Nations and Asian Development Bank. Since Samoa is affected by institutional pressures, institutional theory is appropriate for examining the institutional contexts that play their different parts in developments in accounting. Moreover, a combination of pressures to follow societal norms, accepted professional practices and alignment with other nations could affect the development of accounting in Samoa. For this reason, studies have drawn on neo-institutional theory in the study of the development of accounting in Samoa.
Institutional theory recognizes that an organization adopts structures and management practices that are considered legitimate by other organizations in their fields, regardless of their actual appropriateness. Meyer and Rowan (1977), Palmer, Jennings and Zhou (1993) and Scott (1987), indicated that information regarding socially accepted and legitimate organizational behavior can be transmitted through tradition, imitation, coercion and through normative pressures. DiMaggio and Powell (1983) and Meyer and Rowan (1977) provided the primary foundation works of the 'new' institutional theory which is based on the premise that organizations react to pressures from their institutional environments and take on structures and/or procedures that are socially accepted as being the appropriate organizational choice. Studies have also examined accounting as a symbol of legitimacy (Carpenter and Feroz, 1992; Covaleski and Dirsmith, 1988).

Scott's (2008) regulatory, normative and cognitive pillars of institutional structure are the most well-known typologies of the institutional processes. Table 1 summarizes the mechanism, logic, indicators, basis of legitimacy and line of reasons for these three institutional pillars.

Table 1: Adapted from Scott (1995:35)

	Regulatory	**Normative**	**Cognitive**
Basis of compliance	Expediency	Social obligation	Taken for granted
Mechanisms	Coercive	Normative	Mimetic
Logic	Instrumentality	Appropriateness	Orthodoxy
Indicators	Rules, laws, sanctions	Certification, accreditation	Prevalence, isomorphism
Basis of legitimacy	Legally sanctioned	Morally governed	Culturally supported, conceptually correct
Line of reasons	What are my interests in this situation?	Given my role in this situation, what is expected of me?	The way we do things around here

The regulatory component of a country's institutional characteristics is defined as those "existing laws and rules in a particular national environment that promote certain types of behaviors and restrict others" (Kostova, 1997:180). Enforcement mechanisms and key processes are largely coercive through rules, boundaries, laws, regulations and sanctions (North, 1990).

Kostova (1997:180) claims that the normative component of a country's institutional profile consists of "social norms, values, beliefs and assumptions that are socially shared and carried out by individuals". Scott (2008) contends that the normative component of institutions delineates what is appropriate and "right" for members of society. Hence, when an institution promotes the "correct" way of behavior (even in the absence of legal or other sanctions), that institution impacts organizational and individual actions through normative processes.

The final cognitive pillar of social institutions accentuates the idea of cognitions and actors' generally shared perceptions of what is typical or taken for granted (Busenitz et al., 2000; Scott, 2008). The cognitive component of a country's institutional profile is a reflection of the cognitive structures and symbolic systems shared among individuals (i.e shared knowledge). This cognitive component of institutions leads to an isomorphism of activities through processes that encourage imitating patterns of activities that require strong cultural support (Scott, 2008).
Studies have suggested that the majority of institutions tend to develop and legitimize platforms through one or more of the processes associated with each pillar, rather than assuming that a nation's social institutions fit neatly into regulative, normative and cognitive pillars (Trevino et al., 2008), this study assumes that the three institutional pillars can be distinguished based on their different characteristics and need to be analyzed an examined respectively.

The following section discusses the two institutional pillars that relate to the development of accounting in Samoa.

Research Method
In order to explore the development of accounting through an institutional lens, archival documents were reviewed. Archives provide a primary source of data for the relevant examination of the development of accounting in Samoa. The use of archival data for this research allowed for a more cost-efficient and time-effective method of gathering the information required for the analysis and discussion of the objectives of the research (Love, 2003; Cardno, 2018; Bowen, 2009). The information used in this research was primarily acquired from the Samoa Institute of Accountants (SIA), Legislative Assembly, Samoa Audit Office, Pacific Association of Supreme Audit Institutions (PASAI) and Ministry of the Prime Minister and Cabinet. The research paper also draws upon extant literature from other published and professional sources.

The following section discusses the two institutional pillars that relate to the development of accounting in Samoa.

Accounting Development and the Regulatory Pillar
The first institutional process works through coercive pressures imposed by the regulatory pillars identified in this study. The regulatory pillars affecting the development of accounting include pressures from the governing body (regulatory frameworks) and pressure from international donors and funders. The second institutional pillar works through normative pressures as a way for members in an organization to conform to rules and social norms that are embedded into their professional activities (DiMaggio and Powell, 1983).

The archival review consisted of agreements between international donors and funding organizations and the government of Samoa, government reports and the legislations pertaining to accounting in Samoa.

Regulatory Framework of Accounting Practice Developments in Samoa

With respect to Samoa, prior to independence, commercial matters were enforced by the practices of the colonial British authority at the time. Accordingly, accounting practices and procedures in Samoa, followed those of the ruling governing power, namely the Companies Act 1933. The government of Samoa sought to develop the business environment post-independence, by the enactment of a new business law, Companies Act 1993. This was amended in 2001 to provide more comprehensive, detailed and clearer directions which included several articles for addressing accounting practices for companies. Amendments to the Act incorporated the director's report and the auditor's report (Companies Act, 2001) and included penalties for non-compliance of related enactments. As argued by DiMaggio and Powell (1983), such development of business laws in general, and accounting regulations in particular, can be explained by the coercive pillar of institutional theory, which emphasizes the role of governmental agencies through the enactment of legislations. More specifically, the government of Samoa introduced laws that influenced accounting development in the country.

Regulatory enforcements represent strong incentives for compliance of accounting and financial reporting practices, in both the public and private sector. The 2019 Public Expenditure and Financial Accountability (PEFA) Performance Assessment Report on Samoa provided recent recommendations for the regulatory framework for the accounting of public funds. The main legislation governing public funds consist of the Public Finance Management (PFM) Act 2001 and the Audit Act 2013. Both these Acts of Parliament have shaped and influenced accounting practices for public funds in Samoa. The PFM Act 2001 stipulates the level, frequency and types of financial reports mandatory for all government departments and corporations. In particular, section 107 to 110 of the Act provides the mandate on financial statements, quarterly summaries, receipts and payment included in the financial statements and departmental reports. The PFM Act 2001 also included provisions for disciplinary proceedings if heads of departments and executives are non-compliant with prescribed regulations.

The Audit Act 2013 has also shaped accounting practices for government departments, in terms of increasing the timing of audit processes, scope and types of audits mandatory for government departments. For example, the introduction of performance and compliance audits are some of the new requirements, previously omitted from preceding legislation, the Audit Office Ordinance 1961. This legislation was influenced by the PASAI, which Samoa is a development partner of. The PASAI was established with the vision that Pacific Supreme Audit Institutions' work contributes to improved management and use of public sector resources leading to increased transparency and accountability to the people of the Pacific. According to its website, this vision is in line with the principal objectives of regionalism in the South Pacific Region:

- Sustainable development that combines economic, social and cultural development in ways that improve livelihoods and well-being, and uses the environment sustainably
- Economic growth that is inclusive and equitable
- Strengthened governance, legal, financial and administrative systems
- Security that ensures stable and safe human, environmental and political conditions for all (https://www.pasai.org/partners)

This organization is funded by its main development partners which include: the Australian Council of Auditors General, Asian Development Bank (ADB), Australian Aid - Department of Foreign Affairs & Trade (DFAT), European Union (EU), Ministry of Foreign Affairs & Trade (MFAT), European Union (EU), United Nations Development Programme (UNDP) and the World Bank. The PASAI states on its mandate that its "relationships with development partners (DPs) and donors are crucial to its on-going success" therefore "maintaining and strengthening relationships with existing primary DPs and other critical DPs is essential" (PASAI, 2009). As stated by the current Secretary-General, "none of our work

would be possible without the support of our development partners. We value each of our partners, whether they are providing expertise, funding, or other support" (PASAI, 2019:3).

Since Samoa's independence, these donors have played an important role in shaping and funding the development of Samoa. The PASAI has played an important role in strengthening the Public Finance Management (PFM) systems of Samoa through the work of its Supreme Audit Institutions (SAIs) as well as its regional programmes (PASAI, 2018). The SAI Samoa 2018 report provides further evidence of the institutional strength and building capacity of the PASAI which has been spread over three overlapping phases: the ISP (Institutional Strengthening Project) of 2006 – 2011, Capacity Supplementation through the model Development Needs Analysis 2012 – 2014 and the 10 Year Strategic Plan of 2014 – 2024. (PASAI, 2018: 4). The ISP comprised of eight major technical components namely:
      1 – Overhaul and Implementation of Audit Office Management & Governance Systems
      2 – Rebuilding / Strengthening of Financial Auditing Capability
      3 – Establishment of an I.T Auditing Function
      4 – Establishment of a Performance Audit Function
      5 – Revision and updating of the Legislative Framework governing the Audit Office
      6 – Strengthening of Human Resources / Organisational Structure
      7 – Implementation of Audit Office computer network and I.T Infrastructure.
      8 – Project Management. (PASAI, 2018:4)

In addition to the PFM Act 2001 and the Audit Act 2013, the Samoa Audit Office's legislative mandate is also laid out in the Audit Regulations 1976, Public Bodies (Performance and Accountability) Act 2001 and Public Bodies (Performance and Accountability) Regulations 2002. As such, the mechanism for conforming to the regulative framework set by the government of Samoa is coercive through the laws, rules and sanctions that can be seen as the indicators of the regulative pillar.

The establishment of the Samoa Institute of Accountants (SIA) Act 2006 is evidence of an institutional process that worked through coercive pressures imposed by the government. As noted by Ioane (2014), the SIA Act 2006 was established upon the request of the government of Samoa to create an interaction and relationship between the Ministry of Revenue and the Samoa Institute of Accountants. The government's request was also evidenced in the SIA 2005 annual report. The SIA 2005 and 2006 annual reports provided the rationale for the SIA Act 2006. According to these reports, the SIA executive body had put forward a proposal to review the Public Accountants Act 1984 for strengthening the institutes power and mandate for its members and accounting practice. It was also the intention of the SIA Act 2006 to rebrand the society from the Western Samoa's Institute of Accountants to the current SIA (SIA, 2005). The government legislation provided SIA with the power to regulate all accounting practices in Samoa (SIA Act, 2006, s.34b). This finding is similar to Sharma and Samkin (2020), which found that the established legislation for the accounting institute was created formally to recognize the power of the profession in governing all accounting aspects and practices in Fiji.

As indicated by the profession, the SIA Bill 2006 proposed to firstly change the change the name of the accounting profession from Western Samoa Society of Accountants to the Samoa Institute of Accountants (SIA, 2006). It then looked at establishing formal rules to govern memberships, in terms of professional conduct, discipline and a code of ethics. It was also proposed to provide a formal protection for professional memberships from non-membership claims. Appendix 1 provides an extract of the SIA Bill 2006 for details regarding the purpose of the bill.
      In terms of strengthening the SIA's power, the SIA Act 2006 created an interaction through the regulative element which, according to Scott (2008), stresses the rule setting, monitoring and sanctioning activities, both formal and informal. A major change proposed in the SIA Bill 2006

included new sanctions for its members and to emphasize the code of professional conduct and ethics (SIA, 2005). The Act also stipulated that while SIA will have the power to monitor all accounting practices in Samoa, there exists a clause whereby the government is able to enforce sanctions if any of the provisions of the SIA Act 2006 is breached. As indicated by Scott (2001), the regulatory process refers to the capacity of regulators to establish rules, inspect others' conformity to them and to manipulate sanctions (punishments or rewards) as necessary in an attempt to influence individual organizations.

The changes applied to the regulatory framework on financial reporting were found to have been influenced by international funding organizations which impacted on government financial reporting practices in Samoa. The influence of international funding organizations on accounting practices was also noted by Sharma and Samkin (2020). As Samoa and Fiji are both categorized as developing countries, by the United Nations, developments in terms of economic trade have received considerable financial aid from international funding organizations. The changes to accounting and financial reporting practices in Samoa were notably evident in the extensive public management sector reforms promoted by bilateral donor partners and international funding organizations in the 1990's. These changes included budget reform, privatization and performance budgeting (Cuthbertson, 1999).

While the PFM Act 2001 provided sanctions and requirements for the accounting of public funds, international funding organizations imposed greater requirements for transparency for the projects they funded. As per the loan/financing agreements between the government of Samoa and the funders, the accounting practices were required to meet the standards of international funding organizations in terms of timeliness and quality of information reported. For instance, the World Bank's financing agreements have more stringent requirements for borrower countries to adopt and utilize specific accounting practices such as budgeting, auditing and financial reporting practices. In Samoa, the Ministry of Finance is the authority responsible for ensuring all departments' compliance with the financial reporting requirements set by international funding organizations (Public Finance Management Act, 2001). Therefore, it is the regulatory pillar that provides organizations with a force for compliance as well as rules, schemes and inferential sets which organizations use when selecting and interpreting information for their further development (DiMaggio and Powell, 1983).

Along this line, the mechanism for conforming to the regulative frameworks set by the government and regional and international institutions are coercive and the laws, rules and sanctions can be seen as the indicators of this pillar. The underlying logic of regulatory compliance is instrumentality (Scott, 1995), which motivates the organization to respond to its most immediate audiences. Coercive influence from international donor and funding organizations is combined with the government of Samoa's regulatory framework to support the regulatory pillar present in the development of accounting practices in Samoa.

Normative Pressures in the Development of Accounting

While the regulatory pillar is easily understood, observable and often formalized in laws and regulations, normative influences are tacit and less identifiable. As indicated in Table 1, the normative pillar refers to shared social belief and values between organizations (Scott, 1995). In contrast to the case of the regulatory pillar, organizational members conform to normative rules and values given their individual interests. Scott (1995) argues that the normative pillar assumes that organizations conform because they feel obliged to. The logic on which the normative pillar is grounded is appropriateness which involves the matching of a situation to the demands of a position.

Moreover, the social norms and values commonly emanate from cultural changes or expectations of the society within which organizations function, including the professional developments through which social norms are embedded into professional activities (DiMaggio & Powell 1983). Consequently, in relation to the development of accounting in Samoa, the normative pillar discussed in this study is from the perspective of the accounting profession and accounting education.

Accounting Profession and Education

The quality of financial reporting rests on the adequacy, competence and effectiveness of the accounting profession (Ali and Ahmed, 2007). The accounting profession was established in 1959 as the Western Samoa Society of Accountants. The first regulation for the accounting profession was issued under the Public Accountants Act 1984, to identify the requirements which had to be met for those who wish to legally engage in accounting practice. A review of the SIA Act 2006 reveals that laws governing the accounting profession and its mandate have been reorganized to accommodate the Ministry of Revenue requirements. As the Act states, its main objectives are building competence and independence amongst its members and adopting accounting and auditing standards that are relevant to the needs of the country. The accounting profession has played an important role in facilitating the adoption of International Financial Reporting Standards and providing accounting education.

The quality of accounting education also plays an important part in the development of the accounting profession. The SIA has recently changed its education curriculum, which now requires interested individuals to undertake its Chartered Accountants program, as part of the prescribed qualification to becoming a full member (SIA, 2006). The Chartered Accountants program was established in affiliation with the Chartered Accountants of Australia and NZ.

According to DiMaggio and Powell (1983), the normative pillar recognizes how professions diffuse shared orientations and organizational practices. Therefore, education and creation of professional networks create the foundation of values and routines within specific occupational areas. A general understanding and development of the social norms and routines among professionals is institutionalized over the period of education and professional development. Professionalization, in relation to the institutionalization process, signifies the collective struggle of members of an occupation to define conditions and methods of their work in order to form a cognitive base and some legitimization for their occupational autonomy (DiMaggio and Powell 1983). As the outcome of professionalization, professionally trained accountants create a powerful set of voices to influence and legitimize the routines and activities of accounting practice.

DiMaggio and Powell (1983) argue that normative modes and rules of professional behavior can be disseminated through the two channels of (i) formal education and growth, and (ii) elaboration of professional networks that span organizations. The conventional education centres for building up occupational and management norms include universities and professional training institutions (DiMaggio and Powell 1983). Professionals (with academic credentials) who undergo a socialization process through university studies before they undertake work, are more likely than others to have internalized reigning social norms and dominant organizational models (DiMaggio and Powell 1983). Professional work in organizations is therefore subject to pressures to conform to a set of norms and rules developed by universities and professional groups.

In line with the work of Scott (1995), normative pressures stem primarily from the professions. The educational training programs delivered through university teaching and the accounting profession's rule of conduct, assume institutional pressure to normalize accounting practice amongst different agencies working in the same area. For example, professional education and training programs influence the potential members' education, who will ultimately become members of the accounting

profession. The SIA has facilitated many activities in the interest of promoting better accounting practices and supporting the adoption of International Financial Reporting Standards.

This research article considered both the regulatory and normative pillars of institutional theory for examining the development of accounting in Samoa. From this examination, there is no indication of the influence of culture on accounting development. The institutional pressures impacting the development of accounting regulations and practices highlighted that absence of provisions for the *FaaSamoa*. As a Pacific island nation with unique cultural values and beliefs which permeates every aspect of the way of life in Samoa, it would be expected that the *FaaSamoa* plays an important role in shaping practices such as accounting. For instance, Masoe (2010) emphasised that the SIA perceived accountability from the cultural lens of collectivism. However, for the current study, there was no evidence to suggest that the *FaaSamoa*, in terms of *alofa*, *aiga* and *faaaloalo*, factored into any of the accounting developments from the lens of institutional theory.

Conclusion

From the institutional theory perspective, this paper analyses the different influences of two institutional pillars on the development of accounting in Samoa. It is argued that accounting practices are developed through institutional relationships, involving regulatory and normative pressures. Based on the discussion of the institutional contexts, this paper argues that the regulatory institution provides direct pressure on the development of accounting, as it is directly regulated by the government. Moreover, it is argued that professional networks and development organization associations are vehicles that promulgate normative rules about accounting practice in Samoa. This is possible through formal and informal network contacts between the SIA and its members, and result in the formation of accepted modes and rules of behavior that develop and change (as indicated by the establishment of the SIA Act 2006).

In summary, the findings indicate that the regulatory framework of government has been a key player in developing accounting practices in Samoa. This has been achieved through the introduction of a number of business laws (regulatory frameworks), which seek to protect the rights of stakeholders in general, and shareholders in particular. Motivations for the establishment of the SIA Act 2006 legislation was in line with Sharma and Samkin (2020), in terms of increasing the formal power of the accounting institute. The study explored the demands by international funding organizations for increased accountability and transparency in Samoa, in terms of providing more accounting and reporting. The findings reveal that pressures from international funding organizations and multinationals (political-economic factors) contributed heavily to the development of accounting practices in Samoa. Similar also to the findings of Sharma and Samkin (2020), these developments took place as a result of collaborations with international funding organizations (e.g. World Bank, Asian Development Bank).

In addition, another important finding from this study indicated the lack of incorporation of the *FaaSamoa* in the development of accounting. From the analysis of the two institutional pillars, there was no evidence to suggest that the Samoan legislations (namely the Audit Act 2012 and SIA Act 2006) contained provisions for the cultural values of *aiga*, *alofa* and *fa'aaloalo*. This paper provides a contribution to both the accounting literature and practice. The interpretations, explanations and theorizations articulated in this work provides us the opportunity, where the evidence allows, to reflect upon the accounting development in Samoa in its complex and messy reality and to see what clues it offers for assessing future possibilities and for informing judgements about accounting practice today (Previts et al., 1990; Previts and Bricker, 1994; Carnegie and Napier, 1996; Oldroyd, 1999; Gomes et al., 2011).

Exploring accounting developments in the Samoan context offers precedents, probabilities and choices from reflections upon what has worked in the past, and what has not, and what was missing and why. The findings from this study also indicated how the *FaaSamoa* was ignored when institutional pressures worked to influence and shape the accounting practices and developments in Samoa. To conclude, the contributions and findings from this study provide a baseline for future research.

Limitations

The limitation for this study is that it is based only on secondary data. However, this provides a basis for further investigation using interviews in the future, to achieve a deeper understanding of institutional actors and institutional pressures in the development of accounting in Samoa.

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Appendix

The SIA 2006 Act was proposed to:
a. continue the Western Samoa Society of Accountants under the name "Samoa Institute of Accountants"; and
b. require the Institute to have rules governing membership, discipline, and other matters and a code of ethics governing the professional conduct of its members; and
c. prohibit the use of terms implying membership of the Institute by persons who are not members; and

d. provide for related matters; and
e. repeal the Public Accountants Act 1984. (p.4, SIA Bill 2006)

Trends in the Number of Students Studying Commerce at Colleges in Samoa

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Abstract

This study examines the trend in student enrolment in the Commerce discipline at colleges in Samoa for the 13-year period from 2006 to 2019. Anecdotal evidence shows a decline in the number of students studying commerce at the high school level but this has not been empirically investigated. Using archival data of the Pacific Secondary School Certificate Examination results and the Samoa Secondary School Leaving Certificate Examination results for the analysis, the study finds that for the period from 2006 to 2019 and especially from 2009 the student enrolment in the Commerce discipline at colleges in Samoa has been on a downward trend. The decline in the number of students taking commerce subjects could have implications on the workforce in that there could be a shortage in the number of qualified personnel in commerce related areas in the future, a problem experienced by some of the developed countries around the world. This is a two-part study and in this Part One of the study we examine the trend in student enrolment in commerce subjects with Part Two examining the reasons for the downward trend to be published next year.
Keywords: student, discipline, trend

Introduction

This study examines the student enrolment in commerce subjects at high schools and colleges in Samoa and at the National University of Samoa (NUS) foundation level. Anecdotal evidence shows that there has been a decline in the number of students studying commerce subjects at high school in Samoa since the mid-2000s. This trend appears to have continued at the National University of Samoa foundation level. This issue may be of concern to various stakeholders such as the government, the Ministry of Education Sports and Culture (MESC), the business community, the National University of Samoa, and professional organizations such as the Samoa Institute of Accountants (SIA) because the fall in the number of students studying commerce could result in a short supply of qualified personnel in commerce if the downward trend continues in the future. Accounting and finance are core business functions vital to an organization's success in any economy (Robert Half, 2014), and a short supply of qualified personnel in these disciplines could increase the cost of these services, and the employers may be forced to source them from abroad at much higher costs. Australia has experienced this dilemma in which there was a national shortage of accountants from 1999 to 2008 and external auditors from 2006 to 2008 (Australian Department of Employment, 2014).[17] Similarly, New Zealand noted a decline in the number of accounting graduates which was partly caused by negative stereotyping and inaccurate knowledge about accountants (Malthus and Fowler, 2009). It is therefore in the interest of Samoa to empirically examine the trend of student enrolment in commerce so that this problem could be appropriately addressed.

In this publication, we first look at the Literature Review, secondly we discuss the institutional background regarding the classification of students in various disciplines in colleges in Samoa, thirdly, we explain our methodology; fourthly, we document the trend in student enrolment in commerce at various colleges in Samoa, we next discuss our results and conclusions and lastly we present our recommendations.

Literature Review

Academic research around the world supported by government-prepared skill shortage lists show that there has been a decline in the number of students studying commerce in some countries. The media and government-prepared skill shortage lists suggest that there is a shortage of accounting personnel in New Zealand (Malthus and Fowler, 2009). However, many students are reluctant to make chartered

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[17] Australian Government, Department of Employment (2014), accessed via
https://employment.gov.au/national-state-and-territory-skill-shortage-information, accessed on 30 July 2014.

accountancy their first career choice (Dyer, 2005; Raman 2005). Tan and Laswad (2006) and Wells (2006) document that the number of domestic students graduating with commerce degrees in New Zealand has decreased. Malthus and Fowler (2009) find that the decline is due in part to the typical 'boring' stereotyping and limited accurate knowledge about accountants. Research in Australia (Worthington and Hicks, 2001; Jackling and Calero, 2006), Canada (Felton, Dimnick, and Northey, 1995), Japan (Sugahara and Boland 2005), Ireland (Byrne and Willis, 2005) and the USA (US) (Albrecht and Sack, 2000) also identified a similar decline in accounting graduate numbers. Suggestions for this decline include a negative perception of accounting, increasing academic requirements, a misunderstanding of accounting and the skills required, and narrow curricula at the high school and tertiary education levels (Albrecht and Sack 2000; Wells 2006).

In addition to the decline in students studying accounting, prior research (e.g. Salemi and Eubanks, 1996) also document a decline in students majoring in economics at universities globally. Salemi and Eubanks (1996) report a decline in students majoring in economics at US universities in the 1990s. They suggest that the decline was due to the waning popularity of undergraduate business studies. Similarly, Reilly and Bachan (2005) find a drop in enrolments in economics at UK universities. Ashworth and Evans (2001) report that early study of economics influenced students' choices at both later year secondary and university. Reilly and Bachan (2005) argue that the decline is due to the increased number of competitor subjects, the abstract and mathematical nature of the subject, the core curriculum offered, and the perception that a relatively severe grading policy is adopted by economics examiners. Worthington and Higgs (2001) also report that Australia experienced a dramatic decline in the number of students undertaking undergraduate economics degrees in the 1990s, a result of the massive fall in the number of students taking economics in high school. In addition, there was a rising popularity of alternative business study courses such as management, marketing and finance. The perception was that these subjects were more interesting and vocationally oriented than economics.

In addition, "Studying economics and why the decline in enrolments matters" (Dwyer 2017), concluded that "the quality of public discourse in Australia and elsewhere has fallen and would benefit from greater economic literacy and engagement with economic ideas", hence the urge for comprehensive studies in order for economies to rescue the decline.

The President of the Business Educators Australasia (BEA) (Tony Kuc, 2017) in his response to the importance of understanding economics emphasizes that the future of economics also lies in the quality teaching of Economics content throughout individual countries Curriculum. (Livermore 2020) in his Bulletin-June Quarter 2020 documents a sharp decline in the size and diversity of the Year 12 Economics student population since the 1990s and how the Reserve Bank has commissioned a comprehensive survey of students to gain evidence of the factors that contribute to this decline. While economics is perceived to be of great significance to society, the survey responses highlighted many students flatly lack interest in or understanding of economics as a subject, even more pronounced for women and those of lower social ranking.

Woods' "Women are dropping out of economics, which means men are running our economy". (Woods, 2017) found that Australia like many other nations, the economics profession has a "leaky pipeline: where women's participation starts off strong but falls through the ranks". At Australia's Treasury and the Reserve Bank of Australia, about 40% to 50% of the staff is women but they account for only around one third of the senior management positions. This is also true assimilation of Samoa's economy in terms of women employability in the higher ranks. (Woods, 2017) also concluded in her article on "Why has economics fallen out of fashion with younger women?" that a number of misconceptions have contributed to this fall in enrolments and interest. One such misapprehension is that "economics is about math and theory and that you only study economics if you want a career in finance" and "students are not necessarily taught how economics applies to the bigger picture societal

issues they are interested in". The Economic Society of Australia has established various affiliations such as Women Economics Network to implement and execute these pipeline problems for economics. Furthermore, another interesting study by (Lodewijks, Stokes and Wright, 2016) argue that it appears that economics is becoming an elite subject for elite UK universities. A similar study was carried out for the Australian economy to find out if similar patterns exist. The similarities between the UK and Australian situation were disturbing and very challenging to economists and to the economics community and society as a whole.

In addition, a study on "A logistic regression analysis on attitudes towards accounting and intention to major in accounting" by (Bekoe, Owusu and Ofori, 2018), using the accounting attitude scale (AAS) developed by Nelson (1991) suggested that attitudes are determined by four factors: referent groups, intrinsic interest, perceptions of the work of accountants and the prestige of the profession. The logistic regression demonstrated that "a positive relationship exists between the referent group factor and students' intentions to major in accounting and that intrinsic interest in the accounting discipline, prior exposure to accounting at the senior level and the desire to pursue further professional accounting qualification in future are the good predictors of student's intention to pursue a career in accounting"(Mc Dowell and Jackling 2010; Jackling and Keenely, 2009, Mariott and Mariott, 2003).

Suzy Morrisey (2018) in her studies focuses on "Women in Economics-in theory and in practice" and she concludes that the representation and position of women in economics could be improved and it will improve the quality, durability and relevance of economic policy advice.

"Gender Performance Differences in High School Economics and Accounting; characterizes gender performance differentials in the University Bursaries examinations in economics and accounting using a repeated measures multivariate analysis of variance. Controls were made for the effects of academic ability, concurrent study of mathematics and inter-year variability. The results indicated that significant gender differences were absent. In contrast, the popularity of this course combination exhibited a strong gender bias" (Keef, Stephen P. 1990). This result further confirms that accounting and economics are the most pure commerce courses which are often not substitutable for other courses.

While the trends in the number of students studying commerce have been well documented, this literature focuses exclusively on the developed countries ignoring the developing nations such as Samoa and other Pacific nations. However, the factors that cause the decline in the developed countries are not necessarily the same for developing countries. For example, none of the studies discussed above cites scholarship opportunities as a factor for the decline in the number of students studying accounting and economics which would be an influential factor in Samoa and other developing nations. Also we argue that student's choices may be influenced by their parents, a factor suggested by (Jackling and Keenely 2009) and Law (2010). As such this study will explore a larger set of reasons for the declining interest in commerce than examined by prior research. In addition, it will establish some literature on issues in commercial studies in Samoa and the Pacific.

In addition, the majority of prior studies focus exclusively on studying student enrolment and student perceptions at university levels, hence ignoring the possibility of student's early career choices and student experiences during high school that may have influenced their choice of subjects. Furthermore, prior studies do not explore the relative influence of other disciplines such as arts and science on student's interests in commerce subjects. This current study suggests that to gauge a better understanding of the student's declining interest in commerce subjects, the perceptions of students at both secondary and tertiary levels as well as educators and parents must be investigated. That will be part 2 of this study that plan to carry out next year.

Institutional Background

In most high schools and colleges in Samoa, students in their final two years (years 12 and 13) are streamlined into four core areas of study, Arts, Commerce, Science and General that pave the way for their future career choices. Students in the Arts discipline mainly study English, Geography, History and Samoan as core subjects, with either a subject in the Commerce or Science disciplines to make up a total of five. For Commerce students, their core subjects include Accounting, Economics, English, and Mathematics with an option from either the Arts or Science disciplines for a total of five subjects. Most Science students take as core subjects, Biology, Chemistry, English, Mathematics, and Physics, with some studying Computing in addition, or in lieu of one of the core Science subjects. Any student who does not study in the combination of subjects in the Arts, Commerce or Science is classified as a General student. Students in year 13 are expected to study the same courses that they studied in year 12.

Students who attain the marks to enter the National University of Samoa foundation level are then expected to continue to study in these specific disciplines. However, those who do not attain the required entry level can pursue other commercial studies at NUS in the Faculties of Education (FOE) and vocational courses in the Faculty of Business and Entrepreneurship (FOBE), or science courses also at FOE and the Faculty of Applied Sciences. At the successful completion of the foundation level, a limited number of students are offered government scholarships for further studies in Australia, New Zealand and Fiji. The rest may continue onto undergraduate studies at NUS (either funded by the government, donor organizations, or privately), the local University of the South Pacific (USP) campus, or seek employment. Some students may pursue privately funded further studies abroad. Some students who fail to complete the foundation level may have a chance to complete it in the following year, while other unsuccessful candidates may seek employment, studies elsewhere, or do nothing at all.

Students' choice of area of study

By the time the students reach their final year at colleges, their choices as to which area of study to pursue at Foundation level would have already been made. All schools are invited to open days and career days as well as the advice they get from university staff members during university faculties school visits. Of course their parents and teachers are their first advisors but in the end, their final choice comes down to first, their areas of strength and second, their career choice.

Methodology

As mentioned above students are streamlined into the four disciplines of Arts, Commerce, General, and Science in year 12. However, it is quite possible for students to switch discipline as a result of their performance in the Samoa School Certificate (SSC) examination. For example, if a student was taking core Arts subjects of English, History, and Geography for the SSC examination but failed History and/or Geography and decided to take another subject for the year 13 SSLC examination, then that student is no longer an Arts student but a General student. Similarly, if a commerce student taking the four core subjects for commerce of English, Accounting, Economics, and Mathematics for the year 12 SSC exam fails Mathematics for example and drops it for the year 13 SSLC examinations then that student is no longer a commerce student but classified as a general studies student. Hence it is more appropriate and more accurate to look at the subjects the students take in their year 13 as shown on the Samoa Secondary Leaving Certificate examination result as the indication of the discipline they have enrolled in in their final year of college and those same subjects and disciplines are their likely area of study they will continue on at the foundation level of the National University of Samoa.

Results and Discussions

This analysis is based entirely on archival data of the Pacific Secondary School Certificate examination (PSSC) results for year 13 students from 2006 to 2013 and the Samoa Secondary Leaving Certificate (SSLC) Examination results from 2014 to 2019. The year 13 examination was formerly called the Pacific Secondary School Certificate (PSSC) before it became known as the Samoa Secondary Leaving Certificate (SSLC) in 2014 with the setting of all examination papers done by local examiners and moderated by local moderators. The data for this research is based on the archival data of the actual examination results submitted to the National University of Samoa each year by the Ministry of Education, Sports and Culture before the university begins its enrolment at the beginning of the year. It is based on the total student population each year for the thirteen-year period covered in this study. We begin by looking at the year 13 student populations from all the high schools and colleges in Samoa.

Figure 1: Year 13 Student Population from 2006 to 2019
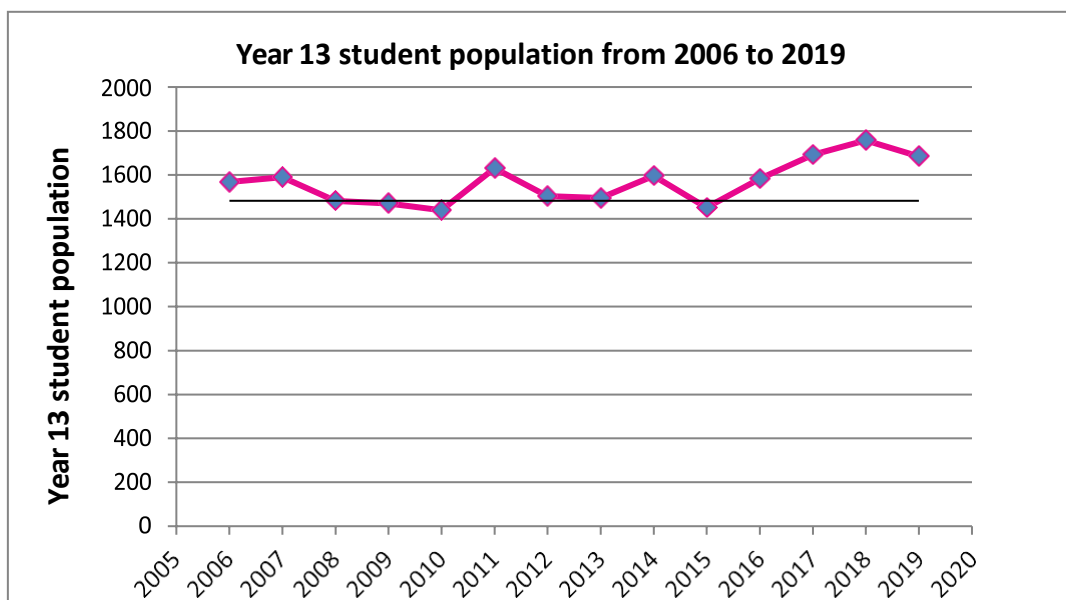
The year 13 student population has been increasing generally over the years with the last three years (2017, 2018, 2019) registering the three highest totals of the period under review of 1691, 1757, and 1684 respectively. It is an encouraging sign as more students are staying on for year 13 rather than dropping out of school after sitting the year 12 School Certificate exam. There were 32 high schools and colleges in the country in 2006. Within the period under review, some schools were closed (Vaipouli College in Savaii, Congregational Christian College, Catholic Combined College) while others (Sagaga College, Savaii Sisifo College) were opened. At the end of 2019, there were 42 schools currently serving the educational need of the children of Samoa at the year 13 level. The majority of the year 13 student population attend schools in the urban area of town, then rural schools and then schools in Savaii. The majority of students are educated in government schools and church schools and a small number are educated in private schools.

The general increase in the year 13 student population suggests that the enrolment in the four disciplines would mirror that trend. However, the analysis finds that this is not the case as shown in the charts below. We separate the disciplines to show the trend of the student enrolment in each discipline from 2006 to 2019 inclusive.

Figure 2(a): Year 13 Student enrolment in Arts from 2006 to 2019
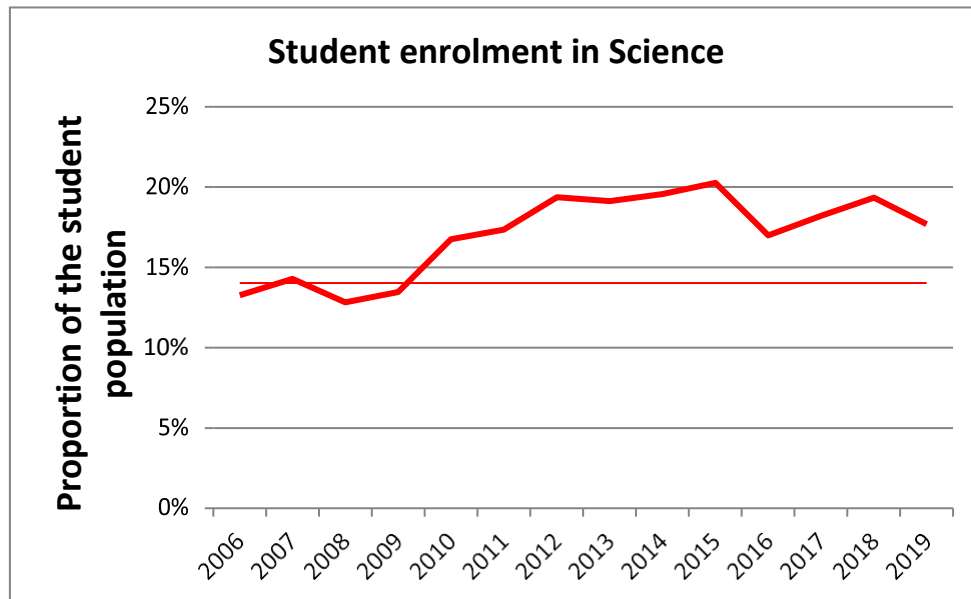

Student enrolment in Arts
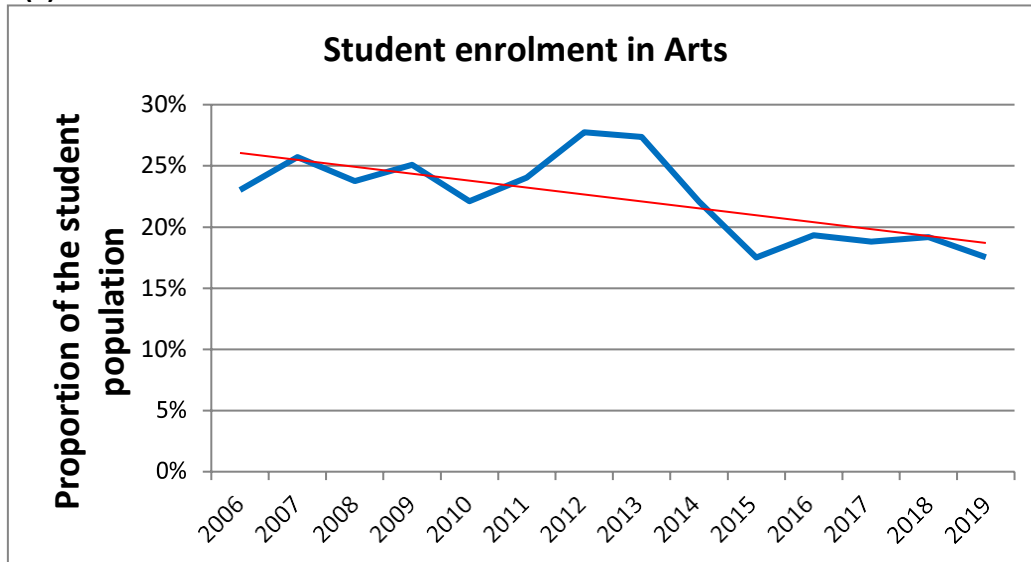
Of all the four core disciplines the Arts area of study shows a generally downward trend especially starting from 2012 where the proportion of Arts students was 28 percent to its lowest of 18 percent last year. The general declining trend in the student numbers in the Arts discipline is steeper than that of the commerce discipline. This trend continues to the foundation level.

Figure 2(b): Student enrolment in Commerce from 2006 to 2019

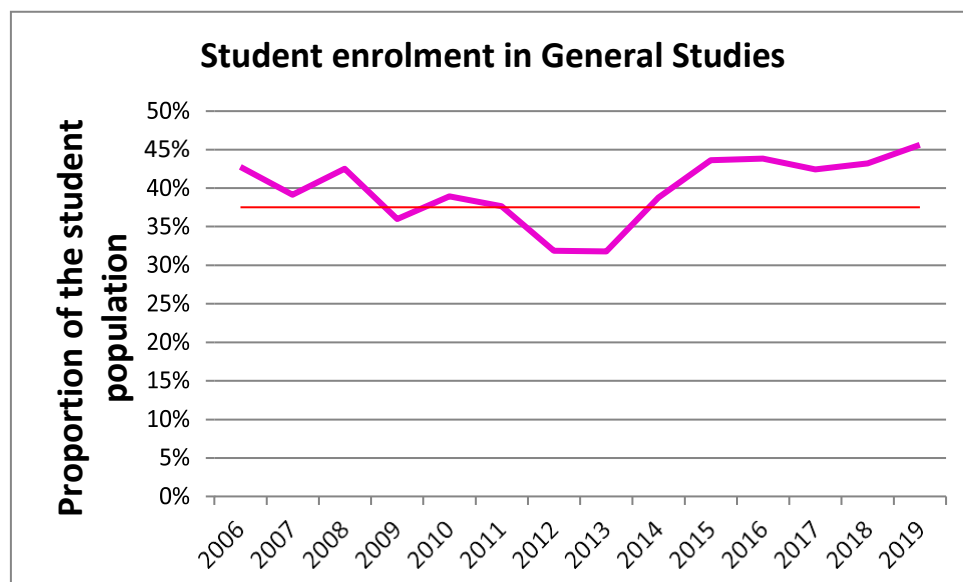Student enrolment in Commerce
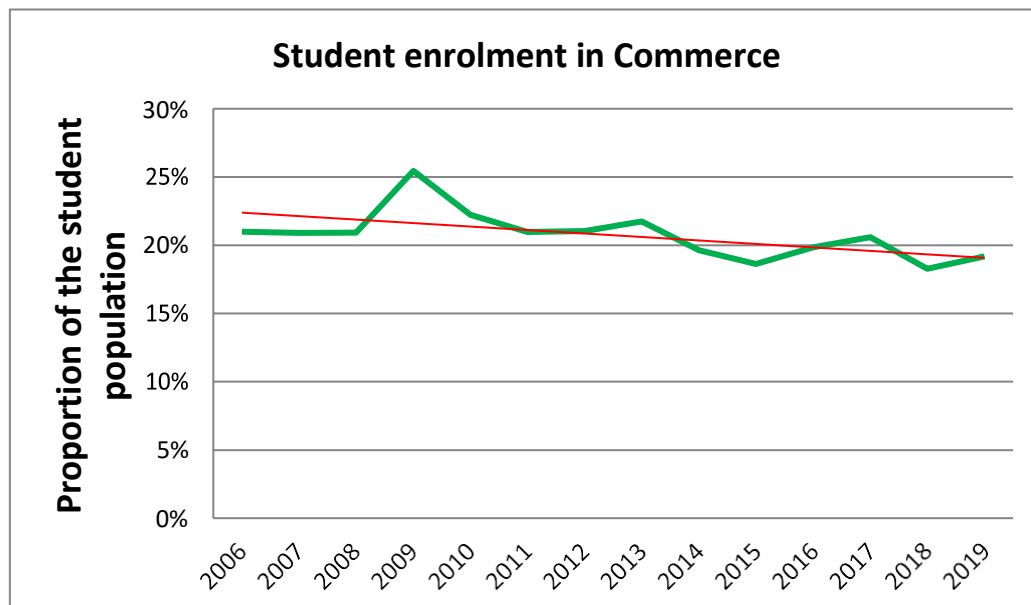
Student enrolment in Commerce also shows a downward trend although not as steeply as the decline in Arts. Student enrolment reached a peak in 2009 of 25 percent of the student population then taking a steady general decline reaching its lowest level of 18 percent in 2018 and a 1 percent increase to 19 percent in 2019. This declining trends continues to the foundation level.

Figure 2(c): Student enrolment in Science from 2006 to 2019

The student enrolment in Science has seen a general increase in trend from 2006 to 2019. It rose from its lowest level in 2006 of 13 percent to 18 percent in 2019. The foundation student enrolment shows similar trends.

Figure 2(d): Student enrolment in General subjects from 2006 to 2019

Student enrolment in General subjects was declining at first from 2006 to 2013 but rose sharply in 2014 and reaching a peak last year of 46 percent. The biggest concern about the rise in the number of students pursuing studies in subjects that do not constitute core subjects of the major disciplines of Arts, Commerce, and Science is that those students will have to choose after their foundation year if

they continue beyond the foundation year which of the Arts, Commerce, and Science discipline they must pursue for a degree and only then they will be taking a subject they did not take before at college thereby impacting their performance. The majority of the foundation level students are enrolled in the General programme.

The following chart gives a comparison of the trends in the four disciplines from 2006 to 2019.

Figure 3: Year 13 student enrolment by discipline from 2006 to 2019 in colleges and high schools in Samoa
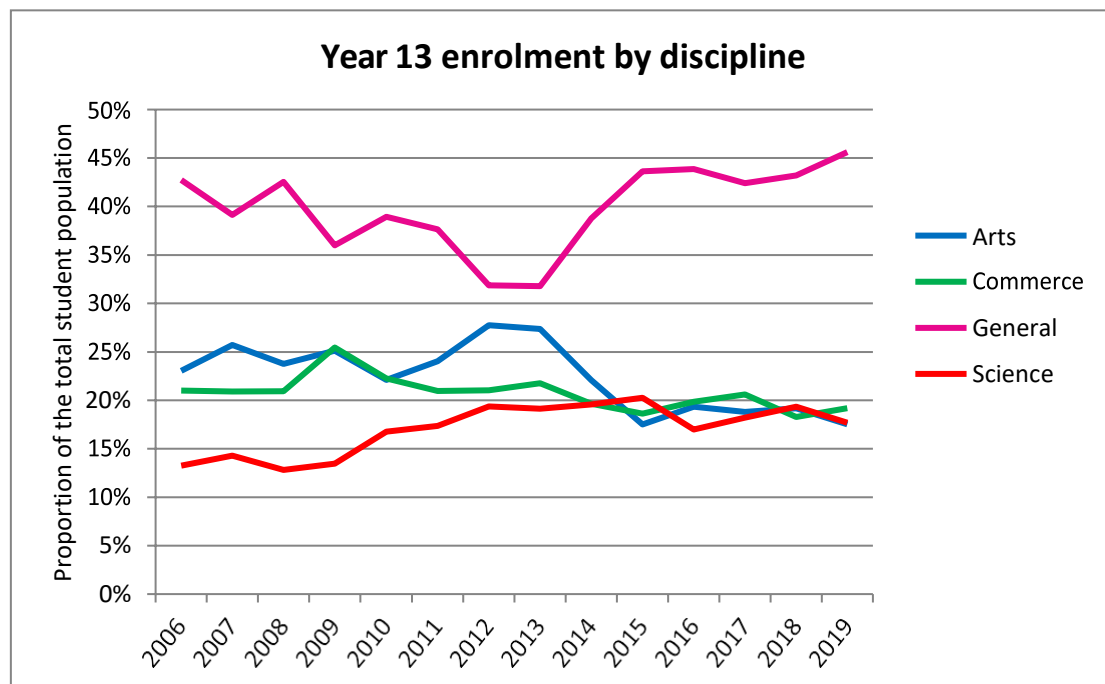

The general trend for both Arts and Commerce in the 13-year period under study is downward despite the general increase in the student population for the same period. This is worrying if it continues in the future. It can be seen that the decline in the student enrolment in these two disciplines is reflected in the general increasing trends in both the Science and the General studies disciplines. As indicated by the chart above in Figure 3, the rise in the number of students taking general studies subjects and enrolling in the general discipline rose significantly in 2014 and continuing on a generally increasing trend since then. Although the causes of all these trends will be confirmed and investigated in depth in Part Two of this paper, what we do know is that it was in 2014 that the year 13 Pacific Secondary School Certificate examination that students in Samoa used to sit was changed to the Samoa Secondary Leaving Certificate examination with all the exam papers set by local examiners and that the result in Mathematics was the worst in the 13-year period under review leading to students not meeting the criteria of the Arts, Commerce, and Science disciplines. This pattern continues on to the foundation level where the majority of students are enrolled in the General programme.

General Studies Discipline:
We break down the General Studies students to indicate the number of students who are taking two commerce subjects:

	Students taking two or more commerce subjects:													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Accounting only	20	10	10	2	6	7	9	0	14	14	6	38	31	36
Accounting & Mathematics	66	69	73	49	44	40	31	23	45	26	15	5	14	16
Economics only	41	47	25	39	33	24	12	12	24	19	19	66	44	42
Economics & Mathematics	101	77	71	51	38	41	54	30	25	42	27	44	49	39
Total	228	203	179	141	121	112	106	65	108	101	67	153	138	133
Total General Studies	672	623	622	519	671	761	659	543	747	950	701	716	759	768
% of General Studies students	34%	33%	29%	27%	18%	15%	16%	12%	14%	11%	10%	21%	18%	17%
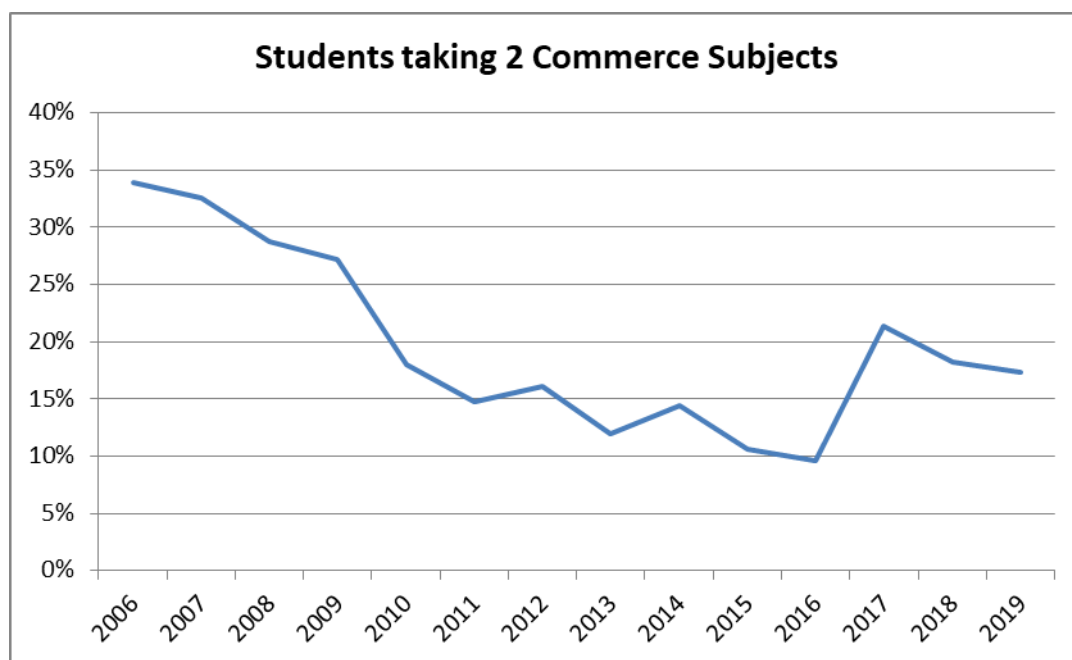
The above table and the accompanying graph shows the percentage of students under the General Studies discipline who are taking i) Accounting only, ii) Economics only, iii) Accounting and Mathematics and iv) Economics and Mathematics. As indicated by the graph above there is a clear downward trend in the number of students who are taking two commerce subjects.

Foundation Enrolment:
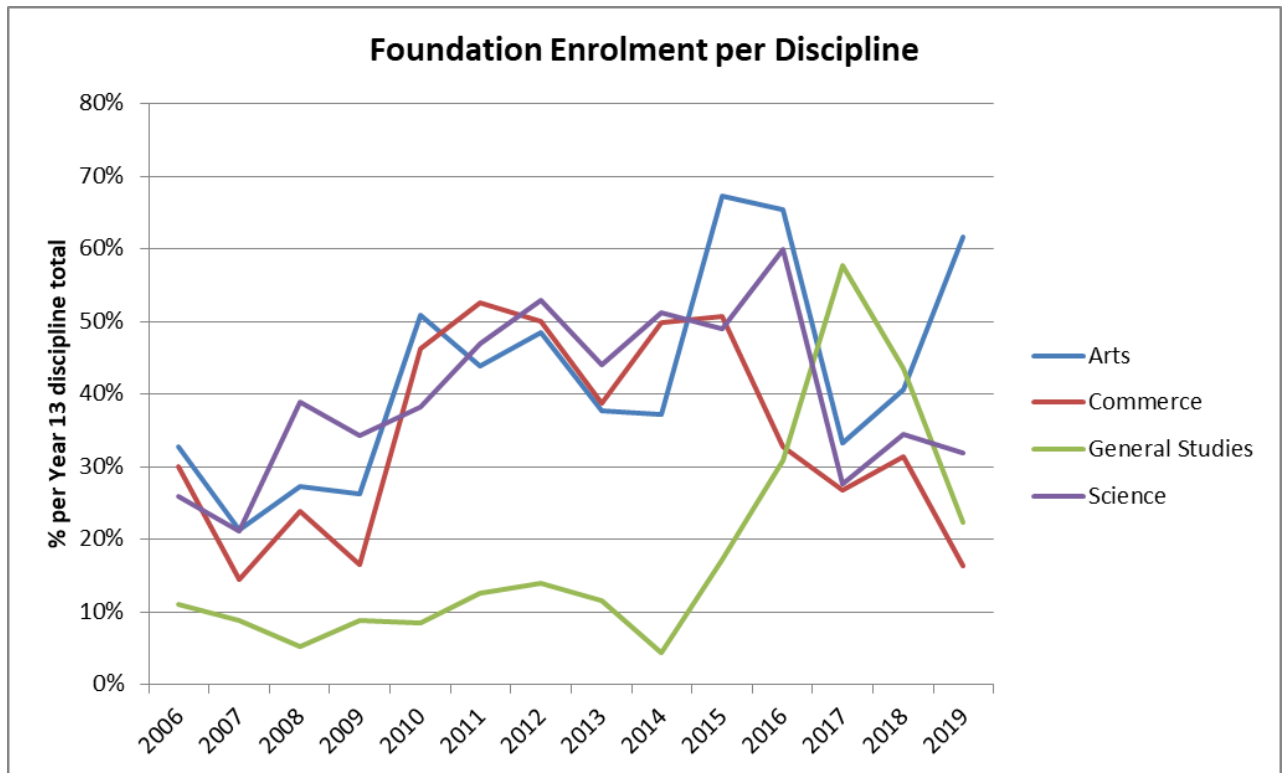
The above chart plots the percentage of students per discipline who enrolled at the Foundation level. As alluded to previously, a student will be enrolled in the General Studies discipline if they failed at least one of the core subjects in the Arts, Commerce or the Science discipline. There was a huge jump in the General Studies enrolment since 2015 while the Commerce enrolment assumed a downward path.

Schools with the most noticeable decline

The following four schools contributed the most in the general decline in student enrolment in commerce subjects. It is noted that with the exception of St. Joseph's College, the other three colleges are among the largest colleges in Samoa in terms of student numbers. What appears to be clear is that any movement and swing in the student enrolment in these big schools will have a dominating impact on the overall student enrolment in the various disciplines at the college level. Due to the change since 2017 in the way the Ministry of Education compiled its examination results and their lack of support to our requests for the new codes so that we could identify the schools, the following charts are for the eleven-year period from 2006 to 2016:

Figure 4(a): Student enrolment in Commerce at Leifiifi College from 2006 to 2016

Leifiifi College Commerce from 2006 to 2016
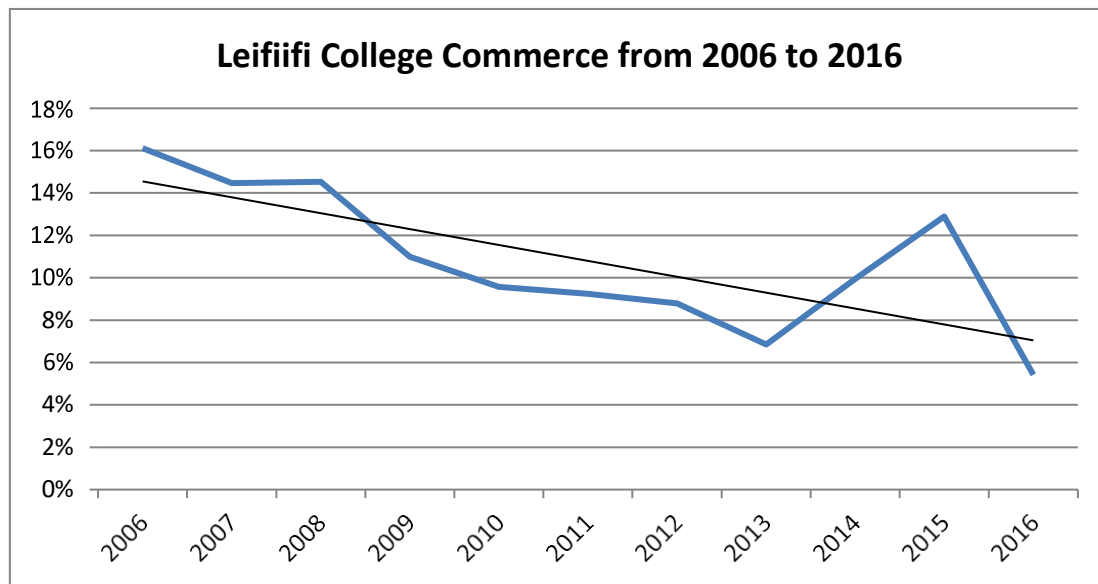
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Leifiifi College Year 13 enrolment	151	126	120	128	153	156	121	114	162	166	87
Percentage of Year 13 student population	10%	8%	8%	9%	9%	8%	7%	7%	9%	8%	5%

Leifiifi College is the largest school by student numbers in the country. Its commerce enrolment over the eleven-year period from 2006 to 2016 is generally a declining trend. Its commerce student enrolment as a percentage of the total commerce student population fell from 16 percent in 2006 to 5 percent in 2016. It rose in the two consecutive years in 2014 and 2015 by 3 percent but fell sharply by 8 percent in 2016, its lowest level in the ten-year period from 2006 to 2016. On average, Leifiifi College makes up 8% of the student population.

Figure 4(b): Student enrolment in Commerce at St. Joseph's College from 2006 to 2016
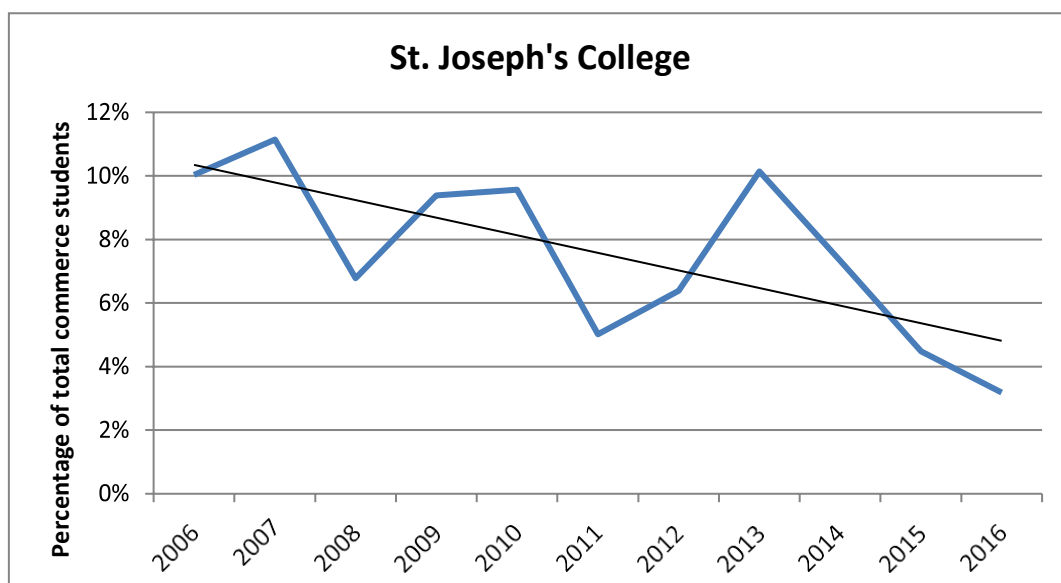
St. Joseph's College

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
St. Joseph's College	108	129	124	102	105	80	65	81	88	44	22
Percentage of Year 13 student population	7%	8%	8%	7%	6%	4%	4%	5%	5%	2%	1%

St. Joseph's College commerce student enrolment also shows a declining trend. Like St. Mary's college which is a predominantly commerce school, St. Josephs' commerce enrolment exhibits huge fluctuations but took a dive in 2014 and falling in the following two consecutive years reaching its lowest level of 3 percent of the total commerce student population. St. Joseph's College on average makes up 5% of the student population.

Figure 4(c): Student enrolment in Commerce at Samoa College from 2006 to 2016
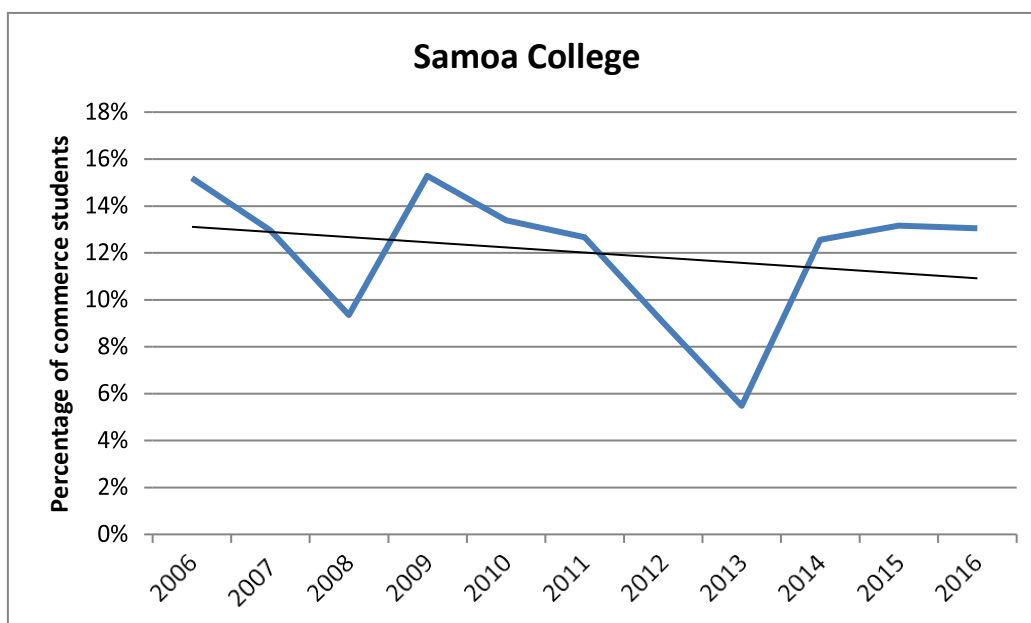
Samoa College

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Samoa College Yr 13 enrolment	170	182	152	174	162	165	172	130	174	129	120
Percentage of Year 13 student population	11%	11%	10%	12%	9%	9%	10%	8%	9%	6%	8%

Considered by most as the best and top college in Samoa with a reputation to be proud of, Samoa College commerce student enrolment in the 13-year period of this study is a cause for concern! The general trend is a decreasing one and as the leading college in Samoa, this decline could inversely impact the future availability of top accounting and economics graduates to support a fast evolving and changing commerce sector of the present time. On average, Samoa College makes up 9% of the student population.

Figure 4(d): Student enrolment in Commerce at Latter Day Saints College - Pesega
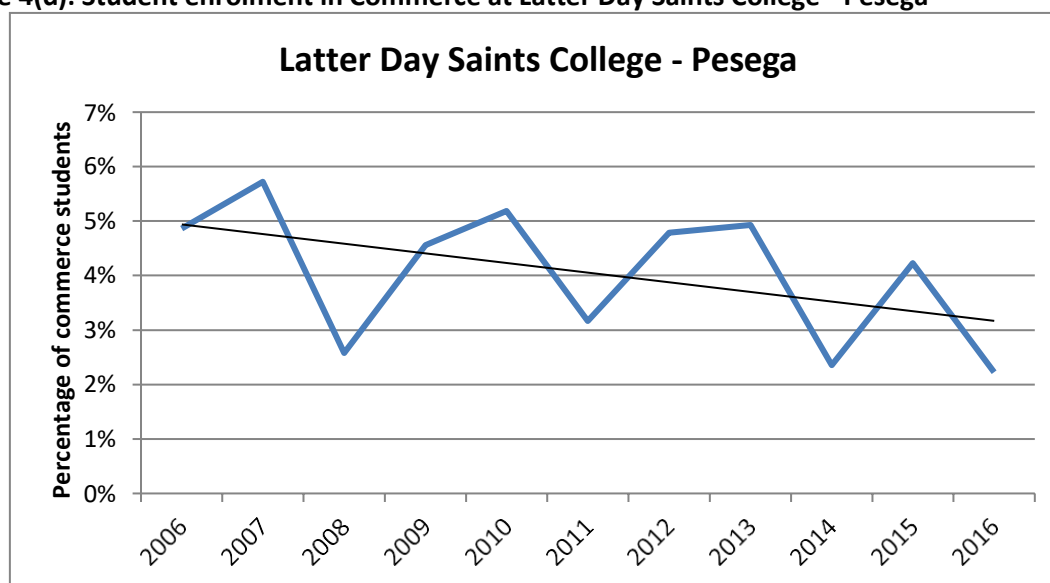
|	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Latter Day Saints - Pesega Yr 13 enrolme	107	93	79	94	104	111	115	131	147	258	128
Percentage of Year 13 student population	7%	6%	5%	6%	6%	6%	6%	8%	8%	13%	8%

The Latter Day Saints College at Pesega has one of the biggest student rolls. If combined with Latter Day Saints College at Vaiola, this church college tops the student rolls in schools in Samoa. In fact in 2015, the combined student rolls for the church college of Samoa registered the highest number. Its commerce student enrolment however is generally on the decline. On average, its student roll makes up 7% of the student population.

On average the top four biggest schools make up 30 percent of the Year 13 student population.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total enrolment by the top 4 schools with Noticeable Decline in commerce	34%	33%	32%	34%	30%	27%	26%	27%	30%	30%	23%

Commerce discipline by gender:

For the eleven-year period in this study and with the exception of the year 2009, the number of female students studying commerce at college is more than male students. This pattern continues to the National University of Samoa where the female students outnumber male students by a ratio of two to one.

Commerce Students by gender
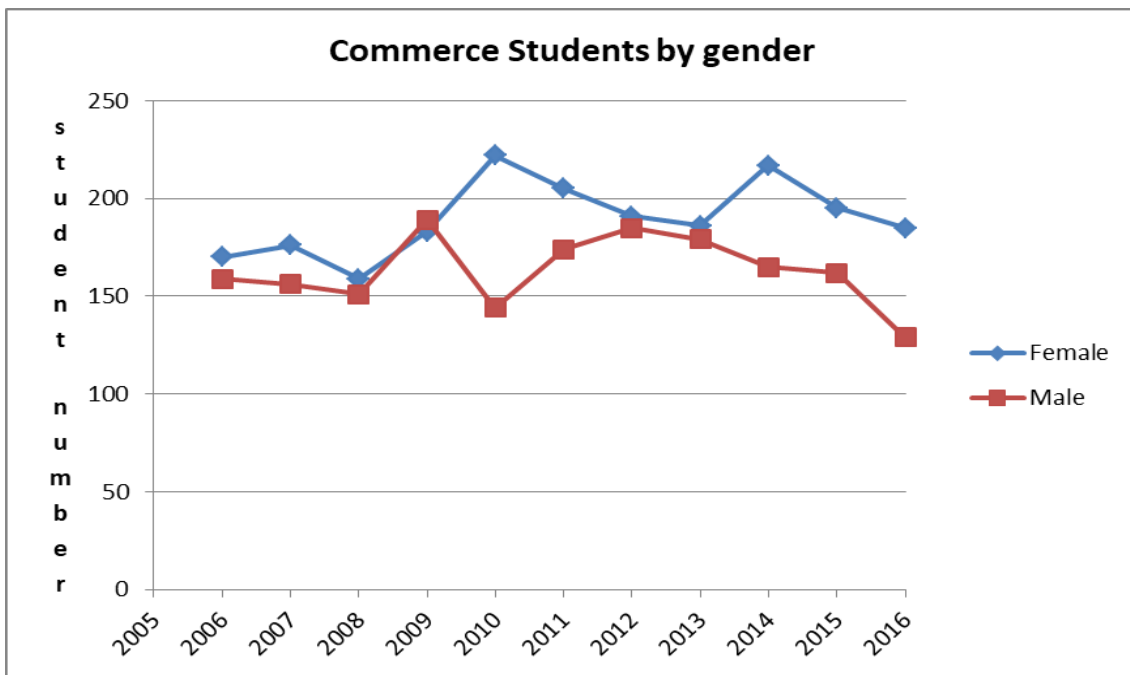
Conclusion

This research paper studies the trend in commerce student enrolment at the colleges in Samoa and the foundation year of the National University of Samoa. The research topic grew out of the suspicion that commerce student numbers are falling as evident during enrolment at the National University of Samoa. In the thirteen-year period from 2006 to 2019, the analysis finds that there is indeed a general declining trend in commerce student enrolments at high schools and colleges in Samoa despite the growth in the year 13 student population and that this trend continues to the foundation level of the National University of Samoa. The downward trend is steeper in the Arts discipline. Though growing steadily over the period in this review, the Science student enrolment on average is still lower than that of the other three major disciplines. Students studying General subjects have been increasing since 2014. The biggest concern with this is that this pattern continues on to the foundation level but there is no continuation of the General programme after the foundation level. All students taking the General programme at the foundation level will have to choose from the Arts, Commerce or Science the area to pursue for their degrees. This raises the question of the possible adverse impact of the availability of the General Programme on student learning when the students were asked to enrol there when the fail one of the core papers in the Arts, Commerce, and Science only to take that subject again when the students pursue their degree studies.

The analysis also finds that the major swings and fluctuations in student enrolments in the four disciplines at the bigger colleges greatly impact the overall trends in the year 13 student population. In other words, a major swing in student numbers in commerce at a large college like Leifiifi College for example is likely to cause a similar impact on the overall commerce student population.

Recommendations

This study makes several important contributions. First, it provides useful information to many stakeholders including NUS; MESC; church and private school councils; the government; the business community; and professional organizations such as Samoa Institute of Accountants (SIA). For example, if one reason for the declining interest in commerce subjects is the poor quality of high school teachers, then MESC, the councils for church and private schools, and NUS who is the local supplier of educators should be concerned. The results should also be useful to NUS in developing or restructuring commerce courses to address the concerns raised by participants and to better allocate scarce resources accordingly. The government and business community would be concerned about this

declining interest as it may affect the supply of qualified personnel to perform accounting and finance tasks. SIA would also be concerned about its future viability as a professional body. Thus, the results of this study not only informs about the state of interest in commerce courses in Samoa, but in triggering awareness of the reasons causing this problem so that appropriate solutions can be identified.

Second, this study provides a base/platform for future on-going evaluation of students' interest in studying commerce courses and issues affecting commerce education in Samoa for future policy and decision making. Third, this study extends extant limited literature on issues in commercial studies education in Samoa (and the Pacific) which has largely been ignored by researchers.

In Part 2 of this study we endeavor to find out the causes of this declining trend in commerce student enrolment at the college level so that they could be appropriately addressed.

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Chain of Command, Communication Protocols and Its Implications for Employee Bypassing at Universities

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Abstract
Universities are operating on the crux of the chain of command and communication channels and these protocols determine the organizational effectiveness and success. Deterring away from the protocols can cause issues of employee bypassing that is a topic of real concern presently. It is therefore, imperative to deliberate on this topic and prudently suggest the way forward for universities.
Keywords: chain of command, communication channels, communication protocol, employee bypassing

Introduction
Universities as Higher Education learning platforms are commonly seen as the authentic tools for the recognition of teaching and learning, research, community service and outreach, consultation, key strategic priorities, national development and the development of students' as cultural citizens. These are clearly stipulated in their Strategic and/or Corporate Plans. The fundamental goal of every university is to achieve its outcomes/outputs which is measured via its key performance indicators. Operational channels of communication in that regard are imperative in Universities because every managerial/administrative function and activity encompass some form of direct or indirect communication. From the basic principles of management planning, organizing, leading, monitoring and controlling, all University supervisors and administrative workforce communicates with and through other persons. This has implications for organizational success as each person's communication skills impact organizational effectiveness (Luneuburg, 2010a, 2010b). Lack of effective communication channels deleteriously impacts organizational effectiveness (Lutgen, 2010). According to Yate (2009), effective communication channels enhance the success of university administrators. The working relationship is enhanced when each department or unit appreciates its role and relationship to other sections and when communication is regular, open and unmediated. The chain of command is existent in all university structures and reassures effective and precise communication, methodical and systematized university operations, and appropriate resource and time allocation. In the context of Universities as part of the organization culture, given that institutions are built on a hierarchal structure and follow the conventional chain of command, in order to warrant smooth and proficient operations, personnel are generally anticipated to converse work concerns to the supervisor directly above them in the hierarchy for direction and resolution. Typical usurping of the chain of command implies that the adherence to the prescribed chain of command is broken. In such instances when personnel bypass the chain of command and initiate communication with administrators one, two or more rungs above them on the hierarchal ladder, by practice or maleficently, this might result in disclosing information to higher ups without the immediate supervisor's knowledge, seeking counselling without keeping their supervisor in the hoop, or seeking help from higher ups just because the personnel feels that their supervisor is inexperienced or incompetent in their job. This is a classic example of bad etiquette. Such behavior inevitably creates issues for the immediate supervisor and obviously, usurping the immediate supervisor creates tension and friction, which can also cause spillover effect on the section. Not only is this seen as disregarding supervisors but also places the personnel's job security in jeopardy. So employee bypassing is a matter of genuine concern to the administration. This research thus deliberates on the significance of maintaining the vigil and communication protocol.

Employee Bypassing

Since employee bypassing is a common occurrence at universities, it is important to curtail it at the emanating stages. Some personnel are habituated to go over their superior's head and report matters higher up the chain of command. It is particularly significant to apprehend the reasons for the bypass to be able to effectively address the issue as leaders. Finding errors/mistakes with supervisors is notably the ultimate motive driving employees to circumvent the chain of command. In addition, some employees break the chain of command to magnify the severity of the matter in order to rationalize usurping the chain of command. The significance of deliberating on the matter punctually with the bypasser is pertinent to be able to diagnose if the incident is a one-off case or endemic. Resolution of the conflict would warrant an overall understanding of the background of the conflict with all parties. It is also imperative that the bypasser dwells on their behaviour and probes on their motives for bypassing and how it could have been prevented.

Discussion

Breaking the chain of command shows a lack of respect for authority. At any university nationally, regionally or internationally, the chain of command and communication protocols always remain intact. Chain of command and information flows can be easily understood through the organizational chart of any Higher education institution. Deliberately or out of ignorance skipping the chain of command is unacceptable behaviour. When staffs respect this protocol, issues can be handled effortlessly and efficiently. Communication exchanges can be disbursed in a timely manner, augmenting the management strategy and overall business decorum. Indeed, this approach may seem inflexible and demanding to those who are constantly 'leapfrogging', however, it does support order and this is an advantage worth defending. Jumping the chain implies a lack of trust amid the employee/subordinate or their superior personnel that they are jumping over. There are a number of key strategies that could be deployed to curtail employee bypassing: First of all, providing the immediate supervisor and the superiors the opportunity to address workplace concerns prior to throwing the matter up the rungs of the ladder. Openness in communication, proper disclosure, transparent approaches, and professional courtesy are the cornerstone of building trust and an effective team. It is important for the employees to comprehend that matters pertaining to their job should not be disclosed to other professional colleagues and the temptation to discuss with administrators higher up the hierarchy should be avoided. This is to stick to the chain of command except in extreme cases. Secondly, administrators who manage their employees, must be appealing, culturally sensitive, precise in communication, and should always present facts and evidences when discussing matters of concern. The discussions emanating should also shed light that bypassing is having a negative effect on operations. It is pertinent to enquire why an employee bypassed, and as leaders propose resolutions on how all parties to the matter can meet their goals by ensuing the chain of command. Apprising the bypasser of the correct/appropriate communication protocols enhances their understanding. Thirdly, it is quite significant that in University settings, higher-level managers and leaders ought to circumvent collaborative discussions with employees regarding workplace issues if the employee has not discussed it with their immediate supervisor. Reasonably, the employees should be steered back to the immediate supervisor, and counselled on the apposite communication protocols. Finally, another important and valid point concerns the fact that employees should repel the impulse to jump in and bypass when they have an idea, proposal, distress, or frustration. It is critical to present the information appositely. Deliberating on the matter and working collaboratively in exploring resolutions allows respect and honor for the team. Consequently, endorsing internal communication is an utmost core to ensuring smooth operations. An organizational climate built on the thrusts of openness, transparency and free flow of communication and information permits a conducive climate at the workplace.

Conclusion

In order to improve university administration, channels of communication or communication protocols needs to be established and enhanced. This can be addressed through leaders having open–door policy which can promote open discussions and deliberations. An important element of the leader's job entails periodically administering employee attitudes and behavior and providing counselling where needed. Training can also be provided and employees need to be informed that violating the chain of command will be immediately referred to the correct level of supervision. It should also be mandatory to notify supervisors of what was communicated when skip level dialogues occur.

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LAW REFORM IN PLURAL SOCIETIES. By Teleiai Lalotoa Mulitalo Ropinisone Silipa Seumanutafa. Springer 2018. The World of Small States, Vol. 2. 185 pp. ISBN 978-3-319-65523-9

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This book, which is about Samoa, law and custom is useful to read in the context of three controversial Bills that were tabled in in Samoa's Parliament in February 2020. They are *The Constitutional Amendment Bill* 2020, *The Land and Titles* Bill 2020 and *The Judicature Bill* 2020. They were prepared for by the Samoa Law Reform Commission under the leadership of the author of this book (based on her PhD thesis) and reflect many of the opinions expressed in it. The Bills address a claim that the constitution of Samoa is inadequate because it provides for individual rights but not for Samoan communal rights. The three Bills were prepared to remedy this defect, 57 years after Samoa became an independent state, by removing the Land and Titles from under the protective umbrella of the constitution and setting it up as an separate entity with new processes aimed to give Samoan customary law equal status to the provisions of law in the Constitution of Samoa.

The title of the book is somewhat misleading because Samoa is not a plural society. That term refers to countries with several different cultures, like Fiji, for example, which has a multi-racial population including an indigenous population with distinct customs, and people belonging to three major religious traditions, Christian, Hindu and Muslim. In contrast, Samoa has a homogenous population comprised almost entirely of ethnic Samoan Christians. It becomes clear that the author is actually referring to *legal* pluralism; a situation where there are two or more separate legal systems in a country – as, for example, in Malaysia, where there is a dual system of courts to include Muslim Sharia law as well as the law inherited from British common law under the Constitution, and some recognition in law of the customs of certain ethnic minorities as well. At present Samoa has two branches of law and courts under its Constitution, one set of courts being based on common law and the other, a Land and Titles Court, which adjudicates disputes in relation to Samoan customary land and titles. Both courts are subject to the protection of fundamental rights under the Constitution of Samoa.

This reviewer was looking forward to reading a description and discussion of Samoa's customary law in the book, but that is missing. The author does presents an extensive review of laws and Acts of Parliament, of which many provide for Samoan custom but, she argues, not sufficiently. Even though the author asserts that in Samoa "there is an overwhelming desire for customary law to be the basis of Samoa's legal system" (p.58) the reader is not told what these customary laws that Samoans desire actually are. She does not explain why, if this is so, there have been so very few cases taken to the Supreme Court of Samoa over conflict between custom and law. Of those few, most contested the Samoan custom by which a village council may banish a wrongdoer and his or her family from a village, with associated destruction of their property (which falls foul of laws against arson). Furthermore the book does not explain why the conflicts between law and custom most frequently aired by village elders in public consultations on law reform concern the constitutional provision for freedom of religion. These concern cases where a village council objects to the establishment of a new religious denomination and the building of its church in a village.

Teleiai contends that "customary laws must form the basis of Samoa's legal system" and that "all parliamentary laws must be contextualized to fit the Samoan customary environment "(p.59). In the discussion of examples of laws, many touch on the powers of a village council. For example there is

limited value to a dog control ordinance if village councils are unaware of it, or choose not to enforce it. But this and other good points don't speak to a need to make law 'more Samoan', although they do speak to weakness in Samoa's system of local government suggesting a need to review the village Fono Act to be more explicit about the powers and duties of village councils. Today only about half the population of Samoa lives in villages that are subject to village council rules, of which most are unwritten and which vary from village to village. The other half of the population live in suburban settlements, where there are no customary rules in force and little in the way of effective local government. Nevertheless, wherever Samoans live they are likely to share, respect, and observe cultural protocols, which is evidence of the vitality of Samoan culture.

The book argues that fundamental rights are in some sense incompatible with customary law. But as Jonathon Sumption said:

> "There are probably only two categories of right that are truly fundamental and generally accepted [in all societies]. First, there are rights which are fundamental because without them life is reduced to a crude contest in the deployment of force. So we have rights not to be arbitrarily detained, injured or killed. We have equality before the law and recourse to impartial and independent courts. Secondly, there are rights without which a community cannot function as a democracy, so there must at least be freedom of thought and expression, assembly and association, and the right to participate in fair and regular elections (The Reith Lectures 2019: *Law and The Decline of Politics*).
> https://www.bbc.co.uk/programmes/m00060vc

It seems to this reviewer that the most ardent Samoan traditionalist would agree with these words. 120 years ago Samoa had no constitution, no written laws, no courts, and no police. Severe disagreements in those days resulted in violent feuds between families and wars between villages and districts. Since 1900 Samoans have lived under a legal system which more or less successfully mixes Samoan custom and modern laws that mostly grew from historic bedrock of British common law and the United Nations Universal Declaration of Human Rights that was drafted by representatives with different legal and cultural backgrounds from all regions of the world in 1948. Since 1962 the government of Samoa has stood, mainly successfully, on three separate posts. The first post is the parliament which makes the laws. The second post is the public service which does the work of government under the laws. The third post is the independent justice system that upholds the laws. Although Teleiai has done a creditable job of pulling together an extended legal argument, this reviewer thinks that her case is contradicted by the facts of Samoa's history.

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