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E-Leadership: Reflections in COVID-19

Rafia Naz, National University of Samoa

Abstract

This paper presents an overview of e-leadership in the pandemic COVID-19 and illuminates on the difference from traditional leadership. Leadership is a classic in itself and successful leadership via information and communication technologies (ICTs) poses numerous challenges. How these challenges can be tackled though e-leadership would be explained via reflections of the author amid the pandemic.
Keywords: COVID-19, ICT, e-Leadership, Virtual teams.

Introduction

Due to the COVID-19 pandemic, the nature of leadership changed from the traditional forms of leadership to e-leadership. The transference necessitated both cultural, social, and technological adaptations. Scholars indicated that leadership has been transformed via the intermediation of new forms of ICTs and changes the manner in which leadership ought to be practiced (Avolio et al., 2000; Avolio and Kahai, 2003a,b; Dasgupta, 2011; Cortellazzo et al., 2019). Scholastically, research on leadership and technology began in 2000 (Avolio et al., 2001), but the deliberations lacked vigor (Van Wart et al., 2019). Even though e-leadership developed immensely (Van Wart et al., 2016) the scholastic contributions have been scanty (Avolio et al., 2014; Oh and Chua, 2018; Roman et al., 2019). Contemporary work indicates that digital leadership has been considered as tantamount for e-leadership (Hüsing et al., 2013; Roman et al., 2019).

Subsequent to the current deliberations (Cortellazzo et al., 2019; Uhlin and Crevani, 2019), this research contributes to the existing scholarship on the correlation between leadership and technology at work. Explicitly, it seeks at facilitating conception of the phenomenon of e-leadership and its definition, and offers philosophical perspective (reflective practice) of the author. Consequently, it highpoints the challenges.

Conceptual Underpinnings and Literature Review

E-leadership is conceptualised as those leaders who conduct many of the processes of leadership largely though electronic channels (Zaccaro and Bader, 2003). It is also regarded as leading via digital forms (Darics, 2020). The concept and its definition has been studied by scholars (Avolio et al., 2000; Van Wart et al., 2017) and tested in the field (Liu et al., 2020).

Based on the reviews of the literature, the scholarship into the research area pertaining to the examination of the interaction of leaders and followers via ICTs showed restricted academic consideration (Roman et al., 2019; Van Wart et al., 2019). There are scholars that have endeavored to operationalize the meaning of e-leadership contemplating it as a competence or a set of competencies (Jones et al., 2017; Roman et al., 2019; Van Wart et al., 2019). The concept has been investigated in the public sector

and the navy (Bergum, 2015; Ch et al., 2020). Scholarships have also explored e-leadership in the context of teams (Ibañez-Cubillas and Miranda Pinto, 2019).

Avolio et al. (2000, 2014) states that e-leadership should be conceptualized as "a social influence process" (p. 619), while Liu et al. (2020) relates e-leadership to inclusiveness and highpoints that e-leadership is all about blending electronic and traditional methods of communication. Van Wart et al. (2019) on the other hand, conceptualizes e-leadership as pertaining to having an enhanced awareness of current ICTs, discerning the adoption of new ICTs and exploring the organization and technical competence in ICT utilization.

Methodology

This study follows from an inquiry-based approach that has primarily relied on the review of the literature both desk reviews and online journal articles with an intent of comprehending e-leadership and providing reflective practice to account for a deeper understanding in the context of the pandemic.

Discussion and Implications

E-leadership is not only a concept but in reflective application and practice of the author during the pandemic, e-leadership was a reality. During the pandemic when the lockdown happened, traditional forms of leadership and support could not be availed to the workforce. It is in this trying period, e-leadership surfaced. E-leadership demanded a change in thinking, the readiness and adaptability as well as the flexibility to leverage technology of the leader and followers ie: the workforce. This mandated basic communication skills, tech competency, social skills, team skills for operationalising virtual teams, change management skills, basic management skills, and the ability to consider work from home contexts and challenges. It was trying to lead and maintain relationships and building trust given challenges posed due to tech glitches, accessibility, workload demands, financial constraints coupled with the workforce being located in different locations with differing ICT tools. The challenge of managing family commitments and balancing the work commitments also added to the diverse challenges in e-leadership. E-leadership mandated the leader/author to set a framework for communication protocols, maintain flexibility and show greater empathy in the pandemic. Rapid transformational change and leadership was required and the leader had to utilise social media, text messages and zoom to interact with the workforce.

Conclusion

It also needs to be stressed out that the author of the article is aware of the research limitations of the findings. The main deficiency is that this research has not relied in primary data collection but rather is an account of the authors' reflections in the pandemic. It would be difficult to draw conclusions just from one reflection on e-leadership practices holistically.

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Migrating to e-Learning –Modelling the Framework

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Abstract

This paper presents the factors that advance or impede e-learning migration. Three conjectural perspectives (Technology Acceptance Model, Resource-based Theory and Institutional Theory) were studied and the framework was presented. Implications of the conjectural underpinnings were outlined.
Keywords: COVID-19, e-Learning, e-Readiness, diffusion/adoption.

Introduction

Due to the COVID-19 pandemic, universities have had to shift their mainstream courses online. This mandated a shift in prominence for the syllabus to be fully integrated online. For others, the transference has been challenging in that it necessitated both cultural and technological adaptations that might else have been premeditated over a longer duration. Some universities were enforced to speedily implement changes to realize the educational vision amid the pandemic. E-learning which has been defined by OECD (2005: 11) as the "use of information and communication technologies (ICTs) to enhance and/or support learning in higher education (HE)" is considered as a contemporary shift in HE towards scheming and realizing e-learning platforms that afford learners virtual access and instructions online. It is a growing pool of modalities, which we can revel given the opportunities, and this modality makes us more conscious of the contemporary limits of using technology. The adaptability of the academia in the face of an unprecedented pandemic has in many respects been permitted and facilitated by our aptitude to connect, absorb and act through the use of technology.

The precursors of this trend are technological advances, revolutions in innovation, the mounting diversity of students globally, and the changes in the education provision (Concannon et al., 2005; Keramati et al., 2011). The cohort of students presently entering into universities and their philosophical curiosity in utilizing technological resources is dictating the diffusion and usage of technology in teaching and learning (T&L), both inside and outside the classroom (De George-Walker and Keeffe, 2010). E-learning in the epidemic is a learning model of emergency management or remote teaching. Previous scholarships indicated that during the pandemic, the usage of online learning had increased considerably, but the real usefulness, and completion rate had not been meaningfully improved (Liu et al., 2020; Yang et al., 2021).

Execution of institutional e-learning unavoidably involves trade-offs and negotiations amid competing institutional and pedagogical objectives (Marshall, 2010; Uys, 2010). This instance of implementation has been unwaveringly supported because of emergencies that required a rapid content migration to the new Learning Management System.

The fruitful rollout of e-learning poses many gains and contests. The gains include the nonexistence of physical and temporal limits, the effortlessness of retrieving resources and flexibility, as well as the effectiveness of the resolution. Other studies have established that e-learning is advantageous to both student learning and student performance. Nevertheless, in order to attain the optimal results from e-learning, students are obligated to be vigorously contributing in the learning process (Aldossary, 2021; Altun et al., 2021).

The most frequently stated trade-offs include technological hitches and the incompetence to use e-learning, mediocre teaching quality, incapacity to instil relevant disciplines, and a deficiency of courses, connection, communication, and the internet (Altun et al., 2021). The adaptation of efficacious technology-based training to operative teaching methods, and poor teaching and delivery practices in managing the assessment and evaluation processes of learning are all shortcomings of e-learning (Debeş, 2021).

Students' attitudes toward e-learning impacts migration to e-learning systems (Avsheniuk et al., 2021; Mathew and Chung, 2020). The challenges per se in e-learning accrue from greater student woVenkoad (Mathew and Chung, 2020), socialization difficulties (Adnan and Anwar, 2020), absence of face-to-face interaction (Didenko et al., 2021), physical and psychological health problems (Nenakhova, 2021), internet connection & technical problems (Adnan and Anwar, 2020; Mathew and Chung, 2020; Nenakhova, 2021).

Examining e-learning readiness could have a noteworthy influence on the fruitful diffusion/ adoption of e-learning enterprises. It could also create better know-how for universities. Irrespective of the evolvement that has been made in e-learning, there is escalating anxiety pertaining to its diffusion in universities. Appraising academics' views and intentions, and understanding the undercurrents at play behind their condemnations of e-learning can help an institution's administration to create feasible mechanisms to endorse espousal of e-learning. Nominal investigations have been conducted in the South Pacific context to empirically determine the connection amid academics' diffusion/adoption of e-learning and factors such as perceived usefulness and perceived ease of use (Singh et al., 2007), technology, content and training (Darab and Montazer, 2011), organizational factors (Nysveen et al., 2005), human resources and finances (Liang et al., 2007), which have all been confirmed to be noteworthy stimulating variables that affect users' behavioural intentions regarding the adoption of a new system. This brings to focus the importance of investigating the aforementioned variables in-lieu of the framework.

Conceptual Underpinnings and Literature Review

E-learning diffusion/adoption is conceptualised as "how the benefits of e-learning are communicated via the social processes that influence the academics' judgment to utilise e-learning systems" (Forlani and Parthasarathy, 2003; Deffuant et al., 2005; Hafeez et al., 2006; Rogers, 2003). Diffusion relates to the processes and mechanisms employed to strengthen e-learning adoption. Adoption is principally linked with the dynamics-inducing acceptance of e-learning.

Three viewpoints: TAM, Resource-based Theory and Institutional Theory serve as the conjectural footings in this study. TAM was advocated by Davis (1989) and is grounded in the conception that a person's behavioural intention (BI) of satisfactory response and their usage of a specific technology is controlled by two concepts: perceived usefulness (PU) and perceived ease of use (PEOU). The two indicators have been proven valid to predict the user acceptance towards several new information technologies (Gao and Yang, 2016). This is a well-known model that has been used to comprehend e-learning diffusion/adoption (Gefen and Straub, 2000), supported extensively by scholars (Kim and Chang, 2007; Moon and Kim, 2001), authenticated for its vigour (Sumak et al., 2011) and reinforced by experiential enquiries (Venkatesh et al. 2003, 2007). Bhattacharyya et al. (2020) used TAM to assess the usage of e-learning as a learning medium.

The Resource-based (RB) theory (Barney, 1991) propositions the academic groundworks to discover the antecedents that affect e-learning diffusion/adoption as well. This theory advocates that organizational resources (macro-level variables) that are expensive or hard to emulate help organizations attain competitive advantage. The first viewpoint of the RB theory speculates that the applied competences of information system could serve as a source of competitive advantage (Bharadwaj, 2000), whilst the second perspective commands on how the resources are availed and exploited to sustain competitive advantage (Ravichandran and Lertwongsatien, 2005). In order to facilitate e-learning diffusion/adoption, universities must deliver acceptable and dependable technical infrastructure in the form of organizational resources (Williams and Eyo, 2011). Training which encompasses computer literacy, online training or technical skills provided by universities to academia (Aydin and Tasci, 2005) is imperative for e-learning reception and execution. Organizational factors such as top management support and governance are also prerequisites for success (Soong et al., 2001; Venkatesh et al., 2003; Venkatesh and Bala, 2008). Another fundamental resource is Human resources, and congruently deficiency of awareness and tech-savvy HR, limits e-learning diffusion/adoption (Aydin and Tasci, 2005). Oktavia et al. (2016) highlights that the two most concerned rudiments in e-learning frameworks are the content and pedagogy. Financial resources also affect e-learning progress (Chatterjee et al., 2002; Liang et al., 2007; Hamel and Valikangas, 2003).

For the assessment of e-learning diffusion/adoption, institutional theory is also relevant. The role of the social milieu and institutional forces surrounding the individual have been much spoken of. Scholars discourse on the notable acknowledgement of institutional forces as significant antecedents of the diffusion/adoption of IS products/practices (Liang et al, 2007; Orlikowski et al, 2001; Teo et al, 2003; Tingling et al. 2002).

Institutional theory can be demarcated as the three mechanisms that lead to institutional changes that will indicate the resemblance either in its structure or in process, which are coercive pressure, normative pressure, and mimetic pressure (Al-Shami et al., 2018).

Overall, two types of coercive pressures prevail: regulatory pressures arising from the Government or regulatory agencies (Harcourt et al, 2005; Zhu et al, 2004) and competitive pressures arising from the risk of losing competitive advantage (Harcourt et al, 2005).

Mimetic pressures are elucidated as voluntary and cognizant emulation of efficacious organisations or high-status actors due to their competitive proficiencies, technological know-how or belief by social actors that imitation will yield positive outcomes (DiMaggio and Powell, 1983; Haberberg and Binsardi, 2002) and can vintage first-mover advantage (Teo et al, 2003).

Jan et al. (2012) study revealed that mimetic pressure has a higher effect on the level of technology acceptance. Normative pressures narrate to professional staff from disciplines that are answerable for decisions on e-learning and explain voluntary and unconscious emulation.

Lestari (2018) study highlights that normative pressure does not affect the level of technology acceptance. The managers' decisions pertaining to e-learning are susceptible to the community of professionals that harvest either mutual learning or are part of similar social networks (Haberberg and Binsardi, 2002).

Methodology

This study follows from an inquiry-based approach that has confined itself to the conceptual underpins of three important theories and based on the review of the literature postulates an integrated framework that could be tested in future studies.

E-Learning Framework

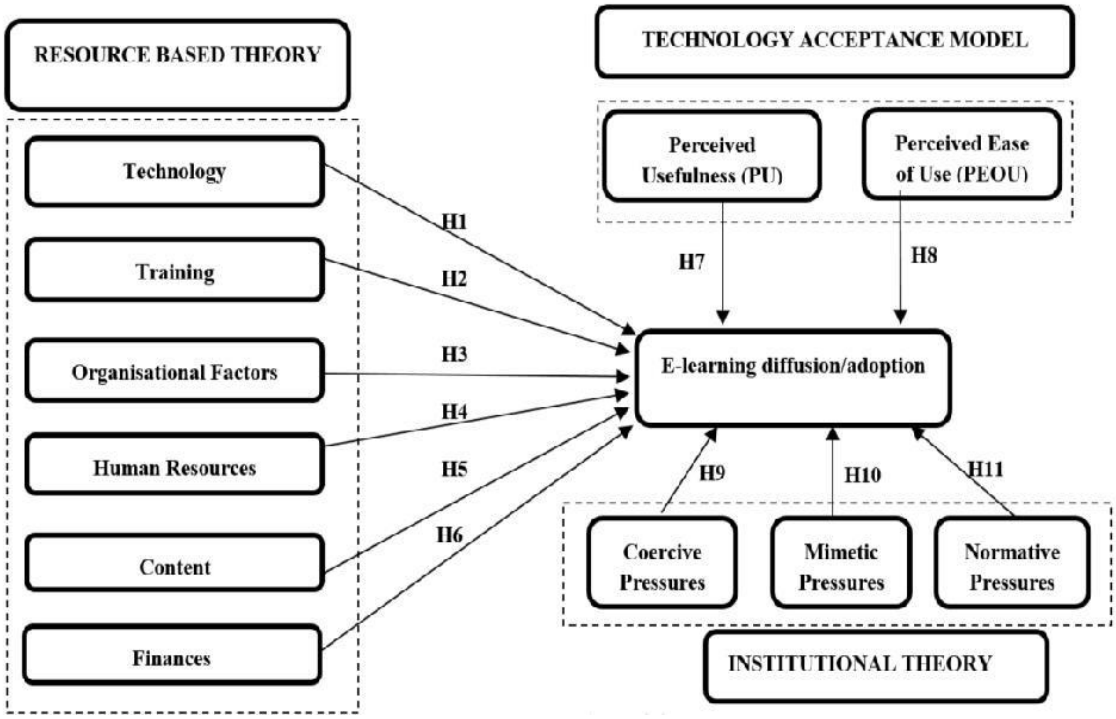
This study recommends an integrated conjectural framework incorporating academics' e-learning reception and intention to use, constructed primarily on the Technology Acceptance Model (TAM), Resource-based Theory and Institutional theory.

Research framework

Based on previous studies, a conjectural model was developed which underpinned from the researchers previous work (Singh et al., 2017).

Figure 1 presents a hypothetical model to be examined and confirmed.

Figure 1. Research Model



Discussion and Implications

In the wake of the disruption to teaching and learning due to COVID-19, most universities have shifted to e-learning, while some nations have adopted a hybrid of online and in-person instruction. Many universities have had reservations about online/digital learning/e-learning. Lack of admittance to internet facilities, absence of proper interaction and contact with learners and instructors and ineffective technology posed major challenges. The unexpected shift from traditional classrooms and face-to-face learning to virtual classrooms resulted in diverse learning experiences for learners.

E-learning cannot produce effective results in underdeveloped countries if the majority of students/learners are inept at accessing the internet due to technical and monetary issues. Stimulating a culture of learning with investments in high-quality education and skills development programs is the key to economic success in today's knowledge-driven digital economy that is rooted in resources and resourcing, providing the institutional foundation to promote successful usage. Placing inclusion first and guaranteeing strategic leadership and management, coupled with well-articulated institutional e-learning objectives, supportive organizational culture, tailor-made support for scholars, and appropriate infrastructure to support e-learning are essentially predominant elements. The intention of the study was to propose a framework that can be judiciously examined.

This study marks prominent implications for scholars and practitioners. It identifies the need for Universities to develop HR (people resources) via training, and articulates the need for social support for

innovative practices. One of the key fundamentals would be to capitalize on resources and consequently imposing competencies to surge diffusion/adoption. For scholars, investigating diffusion/adoption of e-learning, this study marks the significance and relevance of the RB theory for enabling/disabling diffusion/adoption.

For practitioners, the implications pertain to the distinction of establishing the persuasive resources and capabilities inducing diffusion/adoption in Universities. Most importantly, the framework indicates that without requisite organizational resources and institutional interventions to augment e-learning diffusion/adoption, e-learning presents no real-world usefulness.

During the COVID-19 pandemic, universities were obligated to adjust their teaching approaches (Küsel et al., 2020). E-learning was the most commonly chased solution for the learning mitigation (Widodo et al., 2020). The pandemic mandated a global transference to the e-learning platform (Hodges et al., 2020), necessitating teachers to acclimatize irrespective of their readiness (Scherer et al., 2021). The framework provides a valuable guide for examining the variables in real scenarios. The framework is supportive in signifying the e-learning readiness which is all about the University's level of preparedness for various facets of e-learning afore its implementation.

Conclusion

The familiarity and preparedness in shifting to e-learning and assessing the variables/dynamics that interplay to affect the outcomes from e-learning have significance for Universities. The empirical research to test such a framework can be added value in analysing the positive aspects, as well as accounting for the shortfalls and could map out specific, local as well as regional strategies/roadmaps to optimize the benefits from e-learning.

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Foreign Affiliated Enterprises in the Emerging Economies in Asia Pacific; Low Labor Cost and Culture Shocks

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Abstract

In the most recent decades, we have seen a few competitive multinational organisations opening operations within the emerging economies in Asia Pacific. Unfortunately, some have had to close their operations after some time whilst others have been able to survive and thrive in the region. The emerging economies in Asia Pacific face material resource constraints which makes attracting, retaining, and sustaining foreign direct investments and globally competitive multinational organisations a very valuable contributor to their nations. Many of the economies have the competitive advantage of low minimum wages. However, these appear not to be enough to retain these multinationals. This report presents some considerations which makes the region that has a comparative competitive advantage of low minimum wages, not enough to attract, retain and sustain globally competitive multinationals.

Keywords: competitive advantage, emerging economies, foreign direct investments, low minimum wages

Introduction

The economic development of emerging countries in Asia Pacific' have been affected by the comparative size of the economies, their remoteness relative to other established markets, and the economic and political vulnerabilities to other natural disasters. These tend to be a major factor in the considerations of entrepreneurs during the decision-making processes of choosing locations for business set up, foreign direct investments, relocations and movement of their labour and capital for business purposes. Though many have access to far fewer goods and services, limited poverty exists In the Pacific Island countries. This is because, many can still depend on a subsistence farming lifestyle (Mak 2012) in addition to a majority receiving remittances from overseas which has also seen recent increases due to the increase in emigrations and the number of people working under the seasonal worker' scheme.

The resource constraints thus, makes the introduction of foreign direct investments, transnational corporations, and competitive multinational enterprises into the region a welcome contributor for economic development. The contribution they bring will include expertise, the capital, the technology, human resource, and other resources that when effectively combined and used will lead to economic growth, productivity, and national wealth.

Multinational enterprises and their associated value chains are known to represent a vital share of the private sectors in many developing and industrialised economies as well many of the developing nations. They are estimated to account for an approximate 80 per cent of world trade according to the 2013 The United Nations Conference on Trade and Development (UNCTAD) estimates (ILO 2013). The introduction of multinationals into the region that is comparatively smaller, will have a material socio-economic contribution towards the expansion of the labour, goods, and services markets, improving the quality of human resource and their impact on the economy.

It will also impact the level of international trade that can be transacted by the economy by increasing the number of available baskets of goods and services available in the country. Ultimately, the increase in the factors of production that will be combined towards aggregate productivity will reasonably lead to a positive impact on the national income and wealth of the nation. Some of the multinationals that have moved into the pacific have included Unilever, Lever Solomon's, Commonwealth Development Corporation (CDC), Star Kist, Van Camp, and Colonial Sugar Refinery. Their contributions in the Pacific throughout the decades cannot be underestimated. If the past is a guide that can be used to estimate the future, life in the pacific will be better with a lot more multinational enterprise. Yazaki (Samoa) Ltd. made a number of economic contributions to Samoa such as boosting the GDP, indirectly assisting some industries, providing income for the utility supplying corporations, assisting with easing unemployment and providing income to families (Tsujita, 2019). Some of these foreign affiliated organisations have been able to continue their operations in the pacific, however some have not been so fortunate and have had to cease their operations after encountering some unique challenges.

In the literature, there are two positions on the economic performance impact of foreign affiliated organisations on small island states. On the one hand, there is the argument that the relative size of the Island States places them at a disadvantage. The argument is that there are limited economies of scale available whilst profits are limited. On the other hand, the size is argued as an advantage that can be exploited (Chand 2012a, b). Small size is considered as a great opportunity to test and trial various products as compared to a larger market. There is also limited competition due to the location which serves as a major barrier for many would-be competitors. Once an enterprise can gain a foothold, they will be in a position to earn first mover advantage profits, limited competition and the opportunity to expand their market share with relative ease, all things being equal. Some of the prior work dates to 1986 (Te'o and Parry 1986). One of the academic works that summarises the impact of multinational enterprises in the South Pacific was conducted in 1981 (Te'o and Parry, 1986) which encourages a more recent academic study in this area.

The findings of that research suggested that the main Foreign Direct Investment and multinational enterprise issues were the high cost of import substitution manufacturing, the rigid and inflexible land systems, not fully exploiting the multinational enterprises skills training potential and pricing policies that reduce the multinational enterprises activities to benefit the host nations. Almost every business environment will have its own unique challenges yet, those who are able to operate have to generally overcome them. The presence of other Multinational Enterprises serves as sufficient evidence that many of the various issues raised do have applicable solutions. Other research has also focused on the firm specific benefits to the nations and the pacific (Chand 2012a, b). Others have also concentrated on doing business in the Pacific (Cai and Stiegert 2012), their role in corruption in the region (Windsor 2017), their structure and design (Shenkar et al., 2014) and multinational enterprise trade, growth and inequality in the region (Greaney and Karacaovali, 2017).

This report is economic development focused and reviews the other considerations which makes the region that has a comparative competitive advantage of low minimum wages not enough to attract, retain and sustain globally competitive multinationals. Such research is believed to serve as an area for consideration and a quality input into related economic development policies for the region.

Methodology

We undertook a descriptive qualitative study involving the examination and archival analysis of secondary data, documents, records, case studies, historical records or information in the public domain. Semi-structured review analysis was conducted on the most recent data available related to the Asia-Pacific region and draws on some of the academic research conducted on the labour force in the region. We employed a purposive, selective sample of the available and relevant data from various research depository and other databases on the subject matter.

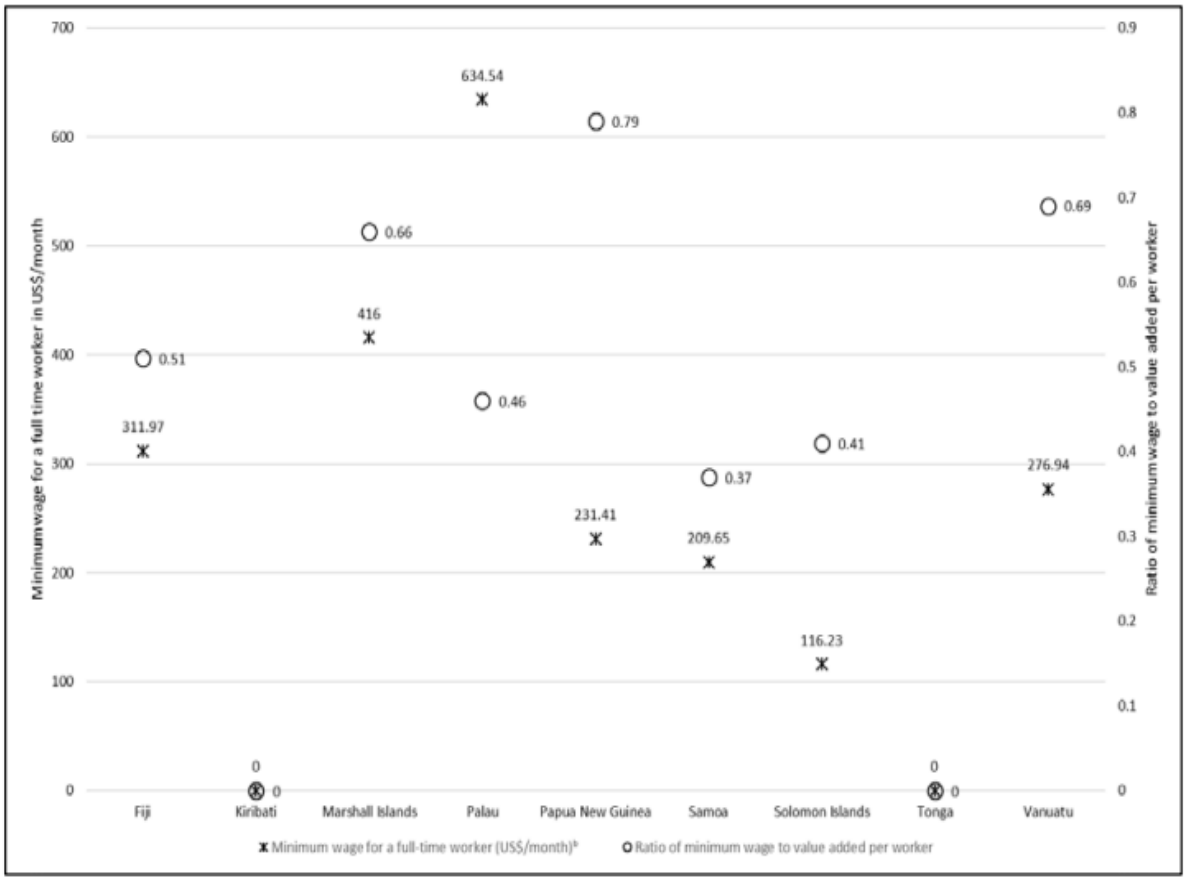
The Minimum Wage in Emerging Economies of Asia-Pacific

The Cobb-Douglas Production Functions is one of the simple yet most used production models which defines a relationship between value-added output and the production factor inputs of capital and labour and technological knowledge. This is the productive activities of all organisations that engage in any form of production that makes use of labour or other forms of capital in addition to technology to produce the goods and services. Underpinning this model is the rational assumption that firms aim to maximise their profit by strategically minimising the cost of production or by the increase in quantity of goods and services sold.

On this basis, before businesses move into the emerging economies in Asia-Pacific, their main considerations will include the cost of labour. This is often reflected by the minimum wage and its associated deviations or the cost of using other factors as input for production and not so much of increasing their sales due to the size of the markets. A reduction in the overall cost of sales ends up increasing the gross profit.

As can be expected, some exceptions apply to the minimum wages and variations exist In the Pacific Island countries with regards to the minimum wage. The varying rules and regulations for paid work across the various economies and territories account for this. The National Minimum Wage in Fiji covers workers in the informal sector, as well as all workers not covered by specific sectoral minimum wages. In Palau, the minimum wage has exceptions related to sector, type of employer, and employee age (Malo, 2017). In Papua New Guinea, exemptions for young people (aged 16-21 years) exist whilst there are different minimum wages for rural and urban workers which is related to exceptions for the agricultural sector.

Figure 1: Minimum Wage in Small Pacific Island Countries in 2016: Levels in US $/Months and Ratios Respect to Value Added Per Worker



Source: Doing Business 2017 (World Bank).

The above figure 1, reflects a comparative minimum wage representation of some of the nations in the emerging economies in Asia Pacific. Majority of the economies have a relatively low minimum wage which then serves as a very attractive path for many of the multinational enterprises who have an option to start operations within Asia-Pacific. With such low minimum wage or lower cost of production with regards to using labour as a factor of production, it is reasonably expected that various firms, especially the multinational enterprises will be looking for the opportunity to expand into the area and start business operations in the region. Some managed to start business operations but after some time had to close due to various reasons. For example, Yazaki, a multinational enterprise and largest private sector employer in Samoa at the time ceased its operations in August 2017. Yazaki in Samoa was employing 671 locals of which 38% were men and 62% women (ILO, 2022). The employment accounted for 12% of the national formal urban workforce and 28.5% of manufacturing sector workers. Under any circumstances, any single institution that can employ that number of people in any country is a positive contributor to that economy.

The benefits they will provide with that amount of workforce goes beyond the income to the workers and its subsequent benefits to their families, but their payment of taxes, the payment that will be made for utility services, the purchases of work related transport services, the payment of pension and superannuation for the workers, the payment for goods and services necessary to attend work, the socio-economic burden that being employed eliminates, the generation of income to the economy, the revenue that will also be recouped into the economy through the international trade

that is conducted resulting from the sales of goods produced at the factory, amongst many other benefits. Following the closure of Yazaki in Samoa, the government started to encourage investment in the manufacturing sector to fill the void.

A multinational enterprise like Yazaki has a structure that operates in at least two countries on a scale where its growth, success and major decisions are made on the basis of its global options. Whatever structure and systems that has created a successful business in another domain that can be successfully adapted into another economy will be a great addition to the emerging economies within the pacific. Multinational enterprises do provide the advantages of technology, labour, markets, capital operational diversity, financial resources, multi-national operational size and scope.

Even within technologically advanced economies, the opportunity to be exposed to better ways of doing the same thing or better productive systems that can generate above normal produce or profits will be a welcome addition. Multinational enterprises have contributed in a major way in developing the pacific island economies in promoting trade, transportation, service industries, training, employment, resource development, developing key natural resources, transfer and access to capital and technology (ILO, 2022).

They also provide capital funds for investment that augments the local supply of capital which allows aggregate output to expand. The funds are used to assist the foreign exchange gap. These provide the much-needed foreign income for the National reserves or current expenditure of the economy. The multinational enterprises provide new products and services that may be missing from the markets. They also provide the factors of production, resource inputs that are either scarce or not available in the pacific economy which provides a lot of consumer surplus, government revenue through taxation and improvement of national welfare.

The Pacific Island Countries face numerous challenges in forging sustainable economic growth. One government official from Niue reportedly stated that “there was no such thing as unemployment in Niue as a Niuean can either go to the bush or sea to survive although it is becoming increasingly common that the subsistence lifestyle is disappearing in highly developed Pacific Island economies like Guam and Hawai’i (Mak, 2012). The MNE’s provide an added option to that way of sustainable living. In the Pacific region, the impact of multinational enterprises and the associated value chains extends to every area of trade, industry, services, and business activity. In general, Pacific Island Countries’ exports have increased by 169% over the past 20 years, reaching $9.6 billion in 2013(Justwanto and Ali, 2016).

Food and live animals accounted for 17% of exports while crude and mineral oils comprised the bulk of export earnings between 1993 and 2013. The Multinational Enterprises also provide job creation, in addition to supplying in some cases the skills development. Additionally, they facilitate productivity factors transfer that stimulates economic development (ILO, 2013).

Many engage in socially responsible operations and contribute effectively to sustainable and inclusive development whilst engaging in multi-stakeholder or industry initiatives. In PNG, Foreign Direct Investment dominates the large-holder agriculture sector and subsequently the associated export (Xu et al., 2018).

In Solomon Islands, Foreign Direct Investments are responsible mainly for Copra and palm oil. In Vanuatu, foreign affiliated companies are involved in Copra production, whilst in Fiji, they are involved in Sugar production, and Tuna processing in American Samoa.

Some of the disadvantages of multinational enterprises have been suggested to include adverse impact of the activities on the host nation, becoming a dominant force in the home country, monopoly power, sometimes the size of the economy allows them unmonitored access and opportunity, transfer pricing, national policy intervention, employment and training policies that have adverse effects. Many of these can use their expertise and capital to quickly become market leaders in the countries they operate in.

This does not necessarily point to stopping them from operating but rather points towards the setting up and review of the laws and regulatory environment in which they operate. Stricter and tougher laws may be the answer. The Pacific Island Countries are small and far from world markets, which means that labour mobility that could potentially improve productivity in the region is limited. The distance from other economies translates into a higher cost to move to and work in the region. Due also to the lower wages in most of the economies, it becomes difficult to pay the level of wages that could attract the best candidates for the job openings.

Recruiting the best labour into the economy becomes challenging whilst losing some of its capable and able workers to the recruitment drive by the more developed economies in the region (Yemoh, 2022).

Attracting and retaining the multinational enterprises in the emerging economies in the pacific represents one of the most significant and substantial opportunities to overcome the employment constraints (The World Bank 2022). Most of the economies have a higher percentage of unemployment and a material portion of the workforce working in informal labour markets.

As such, any adjustments that could increase the recruitment will be a positive economic step. Due to the slow economic growth in many economies, the further geographical obstacles, population growth, the presence of regulatory barriers accelerating urbanisation means that employment creation is a pressing priority for small pacific island countries. The minimum wage payable to labour may be a barrier that may need an appropriate strategy to entice labour. Although the strategy will vary between these countries, given their diversity, size, location, natural resource endowments and demographics, strategies like the seasonal workers schemes are an important opportunity being given to many of the workers through the expansion of work opportunities for pacific people (The World Bank, 2022).

Culture and Other Factors Restrict the Gains from Cheap Labour

Statistically, the backbone of the Pacific Island economies has been Agriculture in addition to the provision of services. These have served as the main sources of livelihood as well as a major export earner for the region. Which have had material implications for all the sectors within the economies leading to the classification of most of these economies at the lower end of economic development.

A United Nations (UN) group's classification, on the basis of low socio-economic development and vulnerability to external shocks, found that the least developed countries were largely agrarian economies that also suffer from low investments and low productivity (UN, 2020). This is a classification that extends to most of the emerging economies within the Pacific. Furthermore, the

report suggested that Agriculture, forestry, and fishing represented approximately 21 percent of value added as a percentage of GDP for the least developed countries from 2011 to 2018. This is also true for the emerging economies. Being agriculture based is the resulting focus of development or the signal or the cause of the economic level. A least developed country-list of 46 member states that were assessed in 2022, 33 were from Africa, 12 in Asia, 1 in the Pacific and 1 in Latin America (UN, 2020).

Many of the emerging economies in Asia Pacific are also comparatively and relatively smaller markets and thus much of the multinational enterprise operations and productions are directed to the export markets. The development inputs utilised by most multinational enterprises in the pacific then tends to be primarily directed to the utilisation of local labour and production factor engagement for international markets. This does generate a great deal of income for the economy as compared to the aggregate quantity of goods and services provided.

Multinational enterprises have particularly been involved in the services sector in the pacific region through the provision of import, wholesale and retail, financing and other services primarily oriented towards trade activities. This constitutes recruitment and contributes wages to the workers with the added multiplier effect on the economy, through the increase in aggregate income, national income, gross domestic products, and per capita income. Their benefits extend to the mobilisation of indigenous and international productive factors, which is liable to leakages.

There multinational enterprises face other unique challenges in the emerging economies in Asia Pacific. To encourage Foreign Direct Investments into these economies by MNEs, some of the economies have instituted policies that restrict their access to capital from the local financial markets which invariably add to their cost of operations. Fiji, for example, has restrictions in place for multinational enterprise subsidiaries with regards to borrowing (Te'o and Parry, 1986). After 25 years of operations in Samoa, the country's biggest private employer, Yazaki Samoa Eds, officially shut down with a loss of 700 employees with a composition of 60 per cent young people. 62% are women and 50% are sole income earners in their families (ILO 2022 and Lesa 2017).

Yazaki workers were reportedly generating about $1.04million in total annual income circulating in the economy and each worker had an average of 10 or more people who depend on them every day, every week.

One of the most notable factors that multinational enterprises have to encounter and deal with is the culture shocks that operating in a new environment comes with. It is not only encountered in the Pacific region alone but in every instance where new operations have to be started in a new area that has unique characteristics that are different from one's home country. For example, the work culture in Australia, New Zealand or China are not exactly the same as the culture in countries like Solomon Island or Samoa with regards to things like Saturday work, weekend opening hours, availability of public transport to facilitate workers to and from work, the lack of food that the workers are used to having migrated into a new environment, the power that other non-work related obligations have on workers being present or absent from providing productive work hours, and many other differences that may exist. One of the main challenges that multinational enterprises face in the emerging economies in Asia Pacific is where does the culture end when it comes to productive paid work. What are the costs of major culture shocks like lack of public transport throughout the week and all hours of the day should corporations need to work outside the official working hours.

Due to the remuneration and the opportunities to engage in informal work and other remittances that workers may have access to, the tendency for labour to be unreliable and committed to their paid employment that may be low paid. In such cases where paid work is a second option, many business owners face untold struggles to attract, sustain and retain quality and good workers. The Isolated location also makes it difficult to gain access to another alternative workforce.

Asia Pacific offers a lot of promising growth opportunities, but it also presents high levels of uncertainty for multinational enterprises. The size of the islands and economies normally means that many value-added tools are absent in addition to resource constraints and limitations especially with regards to the labour markets. A bigger economy will have various developed labour market quality assurance tools, brokers, monitors, regulators, and other tools that are present in the labour markets of the developed economies. One of the main things missing in some of the emerging economies in Asia Pacific is the limited number of competitive service providers like recruitment agencies. Many recruitments in some of the economies are done on Facebook, through word of mouth or limited job placement sites (Yemoh, 2022).

Also, with the introduction and operation of the seasonal workers scheme, many workers who qualify for the scheme are largely looking for a job in the local market that provides money in the short term whilst they wait on their primary goal of travelling overseas. Most of the wages they will be earning is not far from the minimum wage which also affects the motivations for work.

The culture of ending work at 12noon on Saturday till Monday in some countries in the pacific also serves as a shock to some of the investors. Except for private businesses and Foreign Direct Investments controlled firms, which all constitute a materially insignificant fraction of the workforce, the majority of workers are not officially obligated to engage in productive labour hours at the same rate of pay that they would have been involved in like they did during the working week. Any work during this time can only be undertaken legally when the employer engages them under the official holiday pay.

This includes public transport which traditionally feeds and facilitates workers from all over the islands to their places of work. Without the publicly subsidised transportation, the cost to transport the workers to and from work becomes far more expensive compared to the apparent benefit they will receive from the wages even if the official double pay is paid to them.

Many of the employers are also not in the position to pay the extra fee and cover the cost due to the income generated. Comparing the cost they will incur during the working week for the same workers to contribute their hours of work to what it will take to engage the same workers over the approximate seventy hours of work, the economic rational choice leads to not engaging workers during this period. Seventy hours every week for 52 weeks if lost by employable organisations and government institutions aggregately imparts the labour force participation, it also restricts the contribution to the aggregate output and ultimately the income and GDP of the economies.

In some countries, every day of the week is not treated differently with regards to conducting paid work. This will present a major shock especially to some of the investors who may be from different faith and religious persuasions that allow them to conduct business activities at various times and days of the week.

The joint venture and local equity requirement in some economies that can normally be found in resource-based projects also serves as a hindrance in some cases. An interesting example was the Westpac Banking Corporations arrangements with Tonga, Kiribati, and Tuvalu (Te'o and Parry, 1986). Having to share equity with others that may not be the original intention and interest of an investor may not be something that every investor may be comfortable with.

Investors whose background is from economies that may be different in its requirement for operating even as a foreigner in that country may struggle with such an idea.

It may even be extreme for an investor who may have spent several years to build up their portfolio of investments and business operation to grapple with the idea of having to share the ownership of their business with a native of the country they are intending to move into especially when they may not be suitably qualified or experienced to provide, what to them is a material contribution to the business.

This is further strengthened when the investor may have other alternative economies to move their businesses to that may not have such seemingly restrictive policies.

Conclusion

Foreign Affiliated Enterprises have been operating globally for decades now and can now be found in many of the emerging economies in Asia Pacific. One of the attractive qualities of operating in the Pacific is the lower cost of the labour factor of production. The Foreign Affiliated Enterprises do provide advantages including technology, labour, markets, capital operational diversity, financial resources, multi-national operational size and scope in addition to many others. At the same time, there are also disadvantages that can come with their operation especially if they are left unchecked. Besides the great benefits of attracting, and retaining them in the region, there are also challenges that they may face when they start their operations. Yazaki Samoa was one of the businesses that could not continue its operation after a few years of operation. One of the core challenges that multinational enterprises face is the culture clash. The work culture in the emerging economies in Asia Pacific, may sometimes be different from their home countries. The availability of public transport may also be different from their home country. Although the challenges do exist, the presence of other multinational enterprises in the emerging economies in the pacific signal that the challenges can be overcome.

Implications

The method chosen was the selective, purposive and public domain based review. Thus, opportunities exist for fellow researchers to undertake further and deeper analysis of the causes, reasons, effects, characteristics and trends of the foreign affiliated enterprises in the region. Other research could extend the factors considered in this research to include things like the legal infrastructure in the region, the business communities and their characteristics, the culture and attitudes towards the operators of such businesses or the financing of such organisations especially in the midst of some of the restrictions that are imposed on them and its impact on their operations. Further research could also incorporate interviews of the current successful businesses and where possible the failed business operators with regards to finding out other factors that may have been missed out of these findings. The conclusions that have been drawn from these can serve as inputs into the policy and practice, regarding the operation of foreign affiliated enterprises in the Asia-Pacific region.

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Moderating Role of Social Context and Support on Stress Consequences amongst University Students in the South Pacific Region

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Abstract

This paper investigates the levels and causes of stress among, and the tolerance level and type of coping strategies used by, first-year university students from the South Pacific region. The study seeks to identify whether social context and support provides a cushion of resilience in this relationship. A conceptual model of moderation is used to test the role of coping strategies and tolerance level on stress consequences and overall health. The study uses structural equation modeling and the outcomes disclose that social context and support plays a defensive role amid an environment of academic stress, but the tangible value can only be comprehended subjective to students' knowledge and understanding of the social context and support systems and structures; and their proficiency in mobilising resources and support to their advantage. Implications from stress and health, institutional, and practitioner perspectives are discussed.

Keywords: Stress, symptoms/responses, consequences, social context/support, and coping strategies.

Introduction

Stress, a significant subject of contemporary interest in the educational arena, has been researched by various scholars and is considered a disturbing global health phenomenon. University students worldwide are susceptible to academic stress (Agolla, 2009; Laurence et al., 2009) and reports from the last two decades have revealed that students experience high level of stress during their undergraduate programs and thus affects their intellectual progress (Ahmed et al., 2014; Robotham and Julian, 2006; Bayram and Bilgel, 2008). The academic environment at universities has received considerable attention (Robotham and Julian, 2006) but pronounced didactic expectations from universities has also led to intensified stressful experiences in first year university students (Bayram and Bilgel, 2008; Greenbank, 2007). Apparently, not all factors can be delimited by the universities but commensurate measures are needed to create an institutional environment that would nurture students' health and support stress management (Robinson, et. al 2006). Robinson et al. (2006) advocate that some universities have been negligent in addressing stress in first year university students (Robinson et al., 2006). Therefore, it is vital to understand that these students are not secluded from the social relations, cultural discourse of the universities, or the ways in which power pervades the teaching and learning environment in the universities (Mann, 2001). Henceforth, the examination of conventional social configurations at the universities ought to be assimilated into the construal of idiosyncratic experience of students (Morrow and Torres, 2002). What is frequently overlooked is the role of social context and support in mitigating adverse stress experiences. This study consequently investigates the levels and causes of stress among, and the tolerance level and type of coping strategies used by, first-year university students from the South Pacific region. Thus, this scholarship conjectures to investigate the variables and calls for research.

Literature review

Stress and Stressors

According to Lazarus and Folkman (1984), stress is the consequence of a person's discernment that they do not have the resources to cope with an apparent situation. Stressors are the sources of stress and there are numerous factors in the educational milieu which have been allied to stress-related outcomes. These factors that trigger stress in students relate to time management issues, financial problems, teacher relations, students' personal goals, social activities, adjustment to the campus environment, lack of support networks, continuous evaluation, such as weekly tests, papers and exams, living expenses, high tuition costs, job uncertainty, expectations from self, family and peers, and teachers, accommodation issues etc. (Harrisa et al., 2015; Busari, 2000; Lumley and Provenzano, 2003; Misra and Castillo, 2004; Macan, et al., 1990; Shah, et. al 2010).

Such stressors are repeatedly more multifaceted for the international scholars, who have to acclimatize to a new culture, linguistic, educational and social milieu and further proliferates stress consequences if the scholars are unwilling to employ support services that are accessible on campus owing to reservations and social stigma (Mori, 2000).

Institutional level stressors such as overcrowded lecture halls, a semester based system, inadequate resources to perform academic work, high student–teacher ratios, deficiency in the teacher–student interface and disciplinary matters are also noted (Shah et al., 2010).

Apart from the academic factors, issues related to social relationships, academic hassles, daily hassles (e.g. being late, travelling, and family problems) may well upset the learning and academic performance of students. Students may also experience stress related to relationships with friends, loneliness, uncertain future, and difficulty of assimilating into the systems (Bhandari, 2012; Hurst, et. al 2013). Findings from study conducted by Thein and Razak (2013) also reveal that academic coping and student engagement significantly explain the variance in student quality of life.

Stress Symptoms

Increased perceived stress has been absolutely correlated with physiological symptoms (Conley and Lehman, 2012), psychological symptoms (Beasley, Thompson, and Davidson, 2002), emotional distress (Kangas and Montgomery, 2011; Poltavski, et. al 2003) and behavioral symptoms among students (Watson, et. al 2008).

Socio-demographic Dynamics: Inducing Stressors and Symptoms

Indications are that the magnitude of stress (Bhandari, 2012) varies due to age differences (Stallman, 2010). Mature students are likewise anticipated to acclimatize well, burgeoning the improvement in university circumstances (Clifton et al., 2008) but varied verdicts are testified.

Gender variances in perceived stress and anxiety levels and coping mechanisms have also been revealed by various studies, where women have been reported to be more susceptible than men to

recurrent stress experiences and differ in their perceptions of stressors (Busari, 2000; Matud, 2004; Schraml et al., 2012). Taylor (2000) conjectures that men are further inclined towards stress consequences.

Research purports that ethnic minority students may undeniably experience a distinct form of stress, viz., minority stress, which is exceptionally unrelated to the general stress experienced by all students (Meyer, 2003). Finally, studies show that there are significant differences in stressors and health status of students who live off-campus versus on-campus (Gaidzanwa, 2001).

Stress Consequences and Coping Mechanisms

Although some level of stress can constructively influence students in terms of motivating, earlier readings have found that excessive stress can be dysfunctional for students and can cause depression (Ng and Hurry, 2011; Bhandari, 2012; Schraml et al., 2012) and this is the major reason why mental health disorders among young population groups is a burgeoning health concern (Bovier, et. al, 2004).

Studies on stress coping mechanisms demonstrate affirmative effects on daily life adaption as well as on physical and mental health (Watson et al., 2008). Amazue and Onyishi (2016) found that stress coping strategies was a significant predictor of work–life balance and contributed in work–life balance after controlling for the effects of gender, age and education.

Mayordomo et al. (2015) also found that young people do not typically use any magical thinking as coping strategy, and they found that use of negative auto-focused coping was associated with lower problem-focused coping. Research studies on negative coping postulate that students new to the university reportedly engage in negative behaviors such as using alcohol, illicit drugs, and cigarettes to cope with stress (Shiffman et al., 2007), or likewise may opt for avoidance coping strategies or lean on emotion-focused coping tactics. Studies have shown the moderating effects of coping on anxiety and mood (Stowell, et.al 2008).

Xuereb (2015) has also found that mature students scored higher on academic resourcefulness and adaptive coping strategies, and lower on maladaptive coping strategies. Coping also partially mediated the relationship between alexithymia and depression. Xi and Hwang (2011) have also found that emotion-focused coping was more effective than problem-focused coping in combating relocation-related depression.

Social Context and Support in the Teaching and Learning Environment (SCS (TLE) or Institutional Milieu))

SCS (TLE) has been touted as a possible buffer amid stressors and stress symptoms (Friedlander et al., 2007). Studies have shown cases where not only the simple manifestation of SCS seems valuable but the efficacy of that support helps students cope (Gibbons, et. al 2011). As per the 'main effects' theory, SCS is pertinent to health in all situations, irrespective of whether stress symptoms persist (Kawachi and Berkman, 2001). Conflicting evidence is however, presented by Wilcox et al. (2005) who support the claims affirming the role of SCS as essentially being instrumental, informational and evaluative but less significant.

Thus, based on the subsequent review of the preceding literature, the following hypotheses are derived for the study:

Hypothesis 1a: Stressors (work related and non– work related) are dependent on the social context and support.

Hypothesis 1b: There are significant variances in the stressors based on age, gender, ethnicity, marital status, on-campus or off-campus location, and social context and support.

Hypothesis 2a: Stress symptoms are dependent on the stressors.

Hypothesis 2b: There is a huge variance in the stress symptoms (physiological, psychological, emotional, and behavioural) due to age, gender, ethnicity, stressors (work and non–work related) and social context and support.

Hypothesis 2c: Social context and support moderates the impact of stress symptoms via stressors.

Hypothesis 3a: There is a huge variance in the stress consequences as a result of stress symptoms, coping strategies and tolerance level.

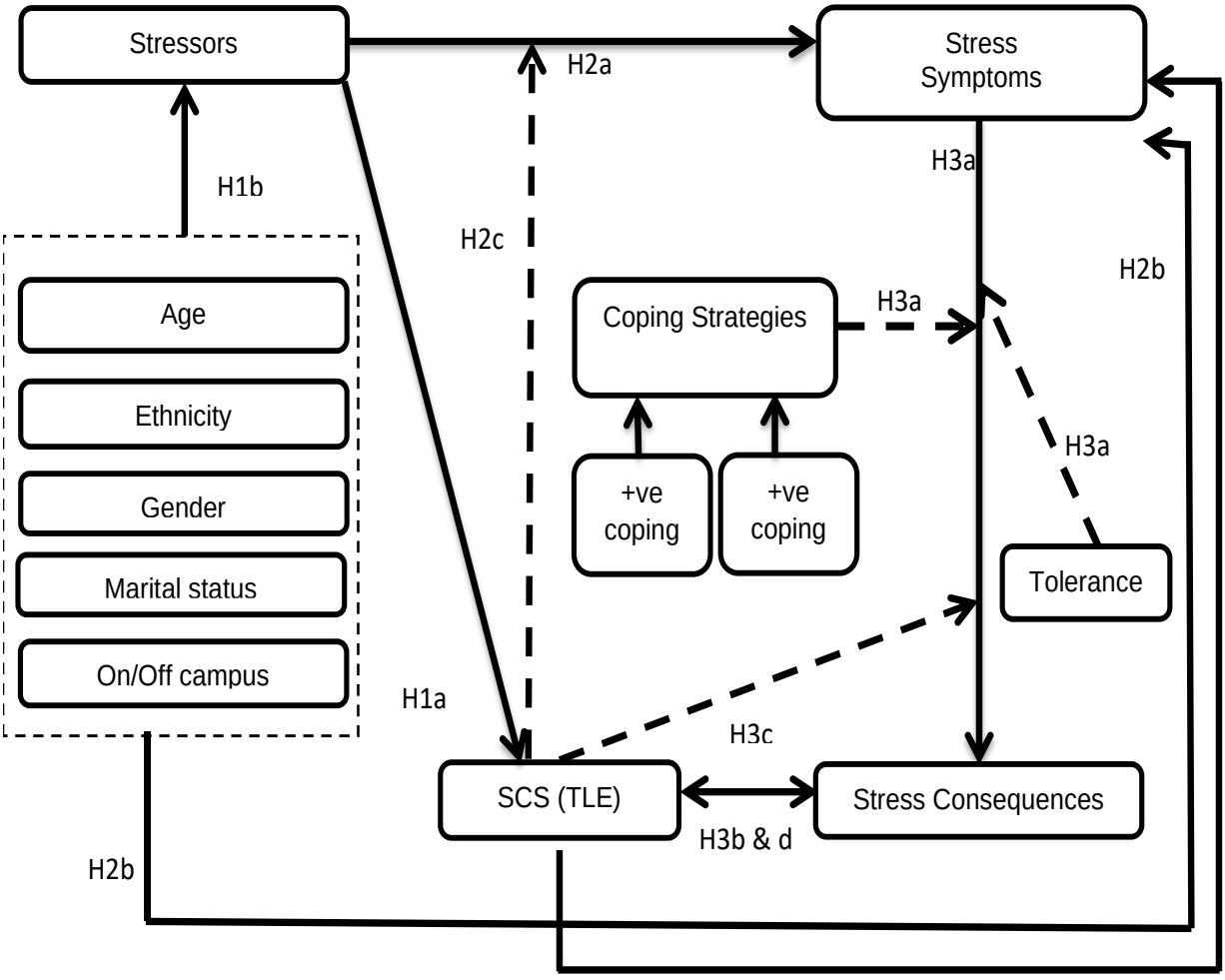
Hypothesis 3b: Social context and support has a direct impact on stress consequences.

Hypothesis 3c: Social context and support moderates the impact of stress consequences through significant stress presence.

Hypothesis 3d: Stress consequences or outcomes determine social context and support.

The following is the research model based on the review of the literature:

Figure 1: Interaction between Stressors, Symptoms and Consequences, Main and Moderating role of SCS (TLE)) & Impact of Coping on Stress Consequences



Theoretical Underpinnings

The Job Demands-Resource (JD-R) model is profoundly relevant to this scholarship; and is being tested in the HEI framework on freshmen students. According to Bakker and Demerouti (2007), The JD-R model envisages that stress levels and negative stress consequences will increase, as the demands operative on an individual intensifies, nonetheless, resource availability is anticipated to moderate the undesirable outcomes of these demands. Demand is delineated by the authors as any physical, social, psychological or organizational influences that necessitates unremitting energy from an individual, whilst resources embrace factors that support individuals in goal accomplishment, moderate demands encountered, and

boost scholarship and progress. In the proposed model, demands are separated into work and non-work related factors.

Research Methodology

The Sample and Subjects

This research was conducted on a 6-months basis; that is, a baseline survey was carried out at the end of the semester amongst 306 students from the South Pacific region (studying at the University of South Pacific). A stratified random sampling technique was used to obtain a representative sample from island countries of the South Pacific region. The subjects involved in the present study comprise undergraduate students from three accredited schools or programmes. In all, 450 students were targeted, of whom 306 willingly gave consent and completed responses (68% consent and response rate).

Instrumentation

A structured, self-administered questionnaire was developed as a mode of data collection. The questionnaire comprised seven sections: Students' Profile; Perceived Stress and Symptoms; Stressors; Factors impacting stress (Social Context and Support, Tolerance Level and Coping); and Stress Consequences. The Cronbach alpha values of the variables tested in the study were 0.66 (stressors), 0.77 (symptoms), 0.88 (consequences), 0.78 (social context and support), 0.81 (tolerance level) and 0.78 (coping strategies) respectively, indicating acceptable internal consistencies.

Procedures

The questionnaires were distributed to the students at the beginning of the semester as these were first-year students. To minimize errors pertaining to internal validity and to control non-response errors, hard copies were self-administered. The other 32% of subjects, who did not respond, were excluded from the sample.

Data Analysis and Tests

Data were analyzed with the help of SPSS. Descriptive analysis, chi-squares and regression were run to test the relationship and impact of the various variables. WarpPls software was used for structural equation modelling to test the modulating variables.

Findings

Respondents' Profile

The majority of the students were males (53.9%) whilst females accounted for remainder of the sample. Of this sample of subjects, 91% lived on-campus while the remainder resided off-campus.

Overview of the Hypothesis Results

Hypothesis 1a: As per the findings of the study, solitarily Work and Non-work stressors with a Chi-square (318.979 and 245.317) are substantial, and thus, reliant on SCS (TLE) as ($p = 0.000 < \alpha\ 0.05$). (Table 1).

Table 1: Dependency between Stressors and Social Context/Support

	WRS*	NWRS*	*SCS (TLE)**
Chi-Square	318.979[a]	245.317[b]	161.967[c]
df	28	20	60
Asymp. Sig.	.000	.000	.000

Note. WRS: work related stressor; NWRS: non-work related stressor; SCS (TLE): social context/support (teaching and learning environment).

Hypothesis 1b: To allow further expansion of the explanatory power of stressors, the regression model comprising the predictor variables (age, gender, and ethnicity, marital status, on/off campus location, and social context and support) were analyzed. The result shows 14% of the variance (r square = 0.14) in the stressors score, and the overall model comprising the predictor variables was significant by ANOVA. This means that the other 86% of the variance in stressors is attributable to other factors (chance or random error) and unexplained in the model.

SCS (TLE) with $\beta = 0.060$, $t = 5.615$, $p = 0.000 < \alpha$ 0.01, 0.05, 0.1, was the single predictor significantly contributing and explaining variance in stressors. All other predictors, age ($\beta = 0.062$, $t = 0.578$, $p = 0.563 > \alpha$ 0.01, 0.05, 0.1), gender ($\beta = 0.034$, $t = 0.346$, $p = 0.729 > \alpha$ 0.01, 0.05, 0.1), ethnicity ($\beta = -0.010$, $t = -0.078$, $p = 0.937 >$ 0.01, 0.05, 0.1), marital status ($\beta = -0.261$, $t = -1.093$, $p = 0.275 > \alpha$ 0.01, 0.05, 0.1), on/off campus ($\beta = 0.053$, $t = 0.249$, $p = 0.803 > \alpha = 0.01, 0.05, 0.1$), were all marginally insignificant (Table 2).

Table 2: Predictors of Stressors

Variable	Stressors	WRS	NWRS
Age	0.062	0.055	0.063
	(0.107)	(0.106)	(0.127)
Gender	0.034	-0.088	0.177
	(0.099)	(0.096)	(0.146)
Ethnicity	-0.010	-0.070	0.080
	(0.132)	(0.127)	(0.169)
Marital Status	-0.261	-0.208	-0.318
	(0.238)	(0.221)	(0.315)
On/Off campus	0.053	0.059	0.053
	(0.214)	(0.225)	(0.267)
SCS (TLE)	0.600***	0.640**	0.548**
	(0.106)	(0.104)	(0.152)
R Squared	0.14	0.16	0.07
F Statistic	4.9***	6.3***	2.6**

Note: Heteroskedastcity robust standard errors are reported below the coefficients in parenthesis. (***), (**), (*) represent significant levels at 1%, 5% and 10% respectively.

Stressors = Work Related Stressors (WRS) + Non Work Related Stressors (NWRS)

Hypothesis 2a: For the interaction between Stress symptoms and Stressors, the results indicate that the Chi-square value (164.147) is significant, and thus, stress symptoms dependent on stressors as (0.023 < p value of 0.05).

Table 3: Dependency between Stress symptoms and Stressors

	Symptoms	*Stressors*
Chi-Square	12.695[a]	164.147[b]
df	226	130
Asymp. Sig.	1.000	.023

Hypothesis 2b: The regression model comprising the predictor variables (age, gender, ethnicity, marital status, on/off campus location, and social context/support) was analysed and significant by ANOVA.

In analysing the stress symptoms score overall, it was found that only WRS and NWRS (stressors) contributed to the model and were significant at the 1% significance level. All other predictors, age (β = -0.090, t = -1.369, p = 0.173 > α 0.01, 0.05, 0.1), gender (β = 0.000, t = 0.006, p = 0.995 > α 0.01, 0.05, 0.1), ethnicity (β = -0.038, t = -0.870, p = 0.385 > 0.01, 0.05, 0.1), marital status (β = 0.154, t = 0.911, p = 0.364 > α 0.01, 0.05, 0.1) and social context/support (β = 0.045, t = 0.502, p = 0.616 > α = 0.01, 0.05, 0.1) were marginally insignificant when included as dummy variables (predictors/independent variables) in the model (Table 4).

Table 4: Predictors of Stress Symptoms

Variable	Physiological Symptoms	Psychological Symptoms	Emotional Symptoms	Behavioral Symptoms	Symptoms
Age	-0.041	-0.179**	-0.151	-0.045	-0.090
	(0.079)	(0.071)	(0.102)	(0.108)	(0.066)
Gender	0.056	0.047	0.141*	-0.120	0.000
	(0.075)	(0.091)	(0.084)	(0.100)	(0.075)
Marital Status	0.079	0.232*	0.126	0.688	0.154
	(0.219)	(0.129)	(0.180)	(0.210)	(0.169)
Ethnicity	-0.018	0.166	-0.088	0.171	-0.038
	(0.103)	(0.128)	(0.109)	(0.134)	(0.043)
WRS	0.159**	0.146**	0.301***	0.101	0.160***
	(0.074)	(0.063)	(0.092)	(0.098)	(0.061)
NWRS	0.071	0.222***	0.212***	0.213***	0.190***

	(0.049)	(0.060)	(0.055)	(0.061)	(0.042)
SCS (TLE)	0.156	-0.037	0.024	0.144	0.045
	(0.098)	(0.109)	(0.108)	(0.132)	(0.090)
R Squared	0.12	0.18	0.30	0.15	0.26
F Statistic	3.4***	5.9***	11.3***	4.8***	8.5***

Note: Heteroscedasticity robust standard errors are reported below the coefficients in parenthesis. (***), (**), (*) represent significant levels at 1%, 5% and 10% respectively.

To further analyse as to which stressor variable predicted stress symptoms the most, each predictor variable (stressors) was regressed with stress symptoms. Based on Table V the equation will be:

Symptoms = 1.624 + 0.044 (task demands) + 0.014 (role demands) + 0.030 (interpersonal demand) + 0.040 (physical demand) + -0.026 (inadequate resources) + 0.059 (peer pressure) + -0.022 (racial discrimination) + 0.021 (social isolation) + 0.052 (home demands) + 0.020 (personal demands) + 0.037 (psychological factors) + 0.021 (economic factors) + 0.024 (environmental factors)

Our model comprising the predictor variables accounts for 27.1% of the variance (r square = 0.271) in the symptoms score. This means that the other 72.9% is attributable to other factors (chance or random error). The overall model comprising the predictor variables was significant by ANOVA ($F_{10, 204} = 5.838$, $p < .005$). Peer pressure ($\beta = 0.166$, $t = 2.513$, $p = 0.01 < \alpha\ 0.05$) was the single predictor significantly contributing and explaining variance in symptoms. This could point towards student's having decreased overall adjustment and thus, become more susceptible to social and psychological problems. The students' social situation is another important factor in causing these problems and could stimulate stress (Dusselier, et. al 2005).

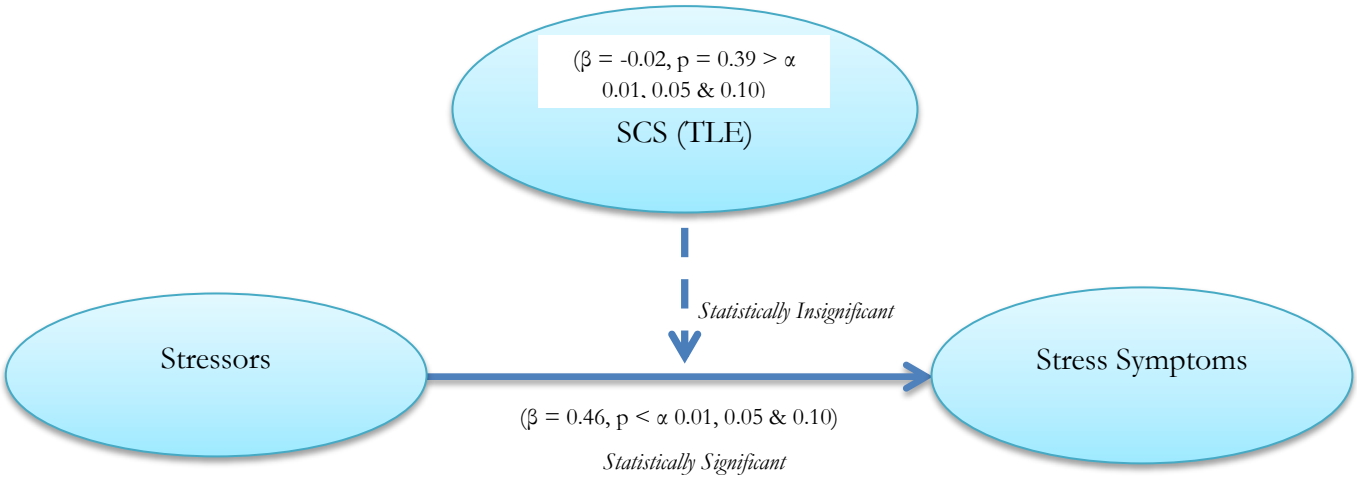
Table 5: Individual Stressors as Predictors of Stress Symptoms

Model (Independent variable)	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	**1.624**	**.124**		**13.057**	**.000**
Task demands	.044	.030	.102	1.480	.140
Role demands	.014	.029	.034	.474	.636
Interpersonal demands	.030	.033	.066	.929	.354
Physical demands	.043	.033	.101	1.318	.189
Inadequate resources	-.026	.031	-.061	-.857	.393
Peer pressure	.059	.023	.166	2.513	.013*
Racial discrimination	.022	.033	.048	.662	.509
Social isolation	.021	.032	.045	.645	.520
Home demands	.052	.029	.137	1.763	.079***
Personal demands	.020	.029	.050	.687	.493
Psychological factors	.037	.030	.100	1.216	.225
Economic factors	.021	.031	.054	.682	.496
Environmental factors	.024	.028	.062	.839	.403

Note: Dependent Variable: Stress Symptoms Heteroscedasticity robust standard errors are reported below the coefficients in parenthesis. (***), (**), (*) represent significant levels at 1%, 5% and 10% respectively.

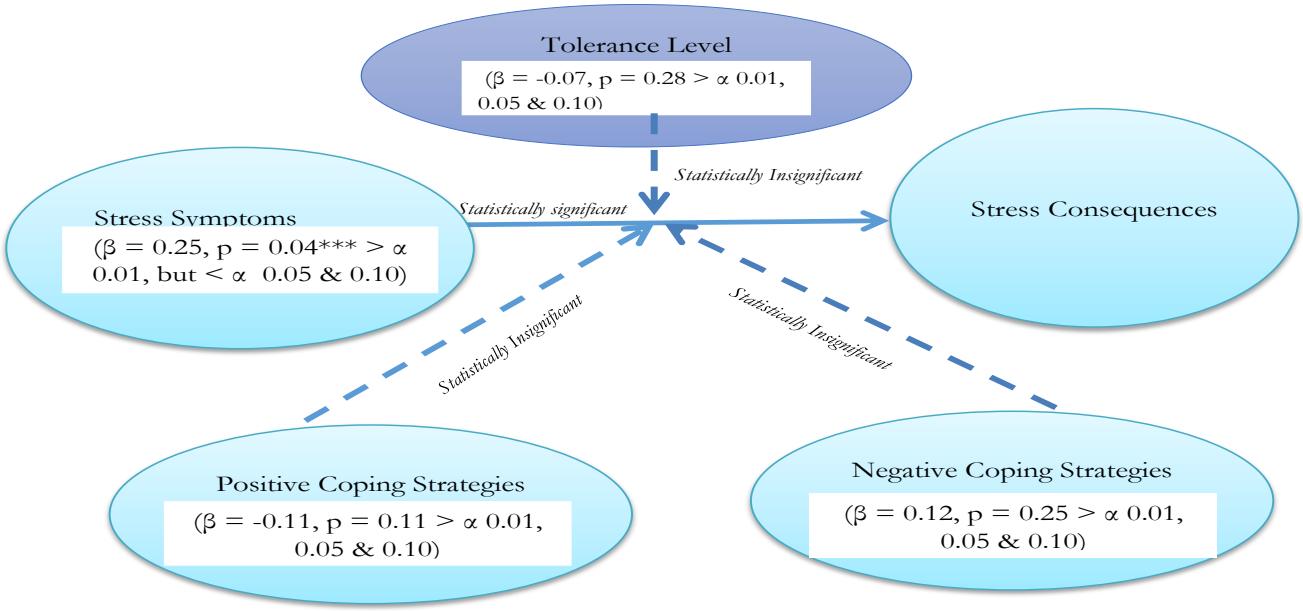
Hypothesis 2c: For the interaction between Stressors and Stress symptoms, statistically significant results were obtained based on structural equation modelling; whilst SCS (TLE) had negative beta values but was statistically insignificant (Figure 2).

Figure 2: Interaction between Stressors and Symptoms, Moderating role of SCS (TLE)



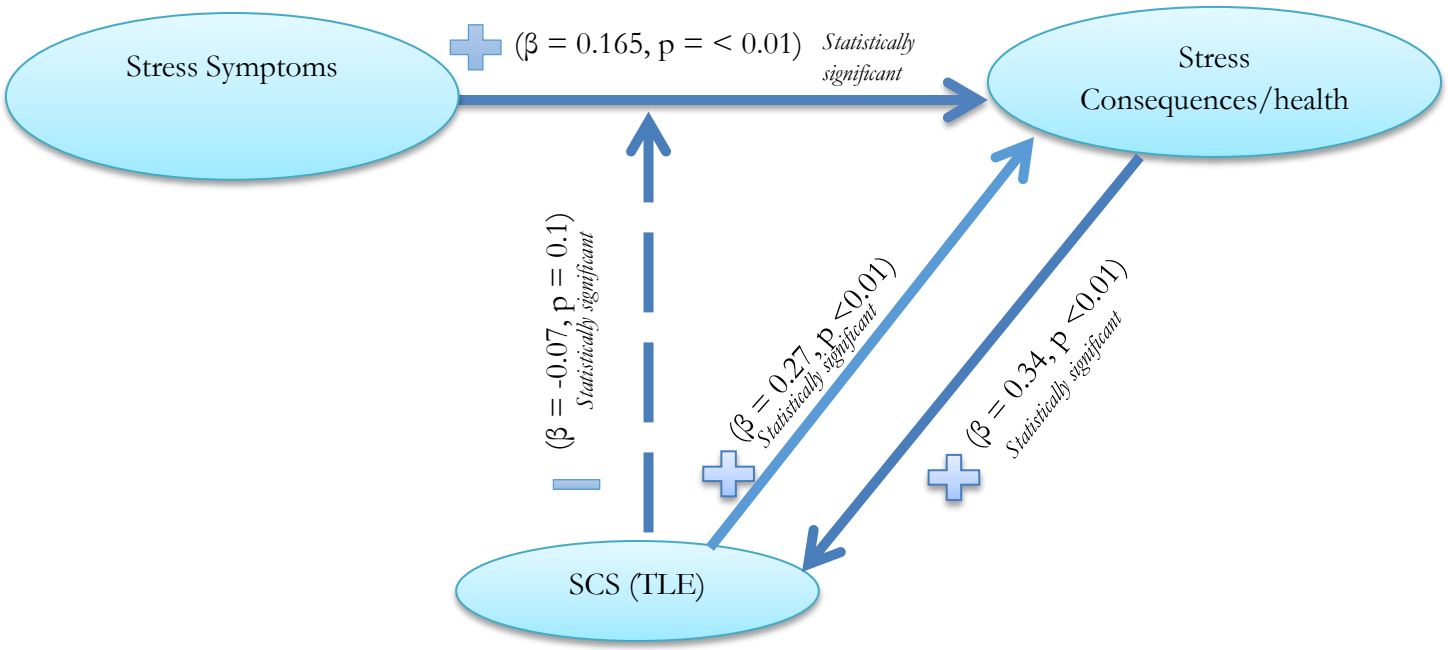
Hypothesis 3a: The results showed the model comprising the predictor variable (stress responses/symptoms) and moderator variables (coping strategies – positive and negative strategies and tolerance level) accounts for 10% of the variance (r square = 0.10) in the stress consequences score. This means that the other 90% is attributable to other factors (chance or random error). The single predictor of stress consequences is stress responses/symptoms. Tolerance level has a negative correlation with stress consequences, but was insignificant in explaining the contribution. Positive coping strategies also had a negative correlation, but again were deemed insignificant. Negative coping strategies showed as positive, but insignificant value.

Figure 3: Interaction between Stress Symptoms & Consequences, Moderator Role of Tolerance & Coping Strategies



Hypotheses 3b, c and d: As per the results, it can be seen that stress responses have a direct impact on stress consequences and is statistically significant. On the contrary, in analysing the buffer effects it is noticed that there is a negative correlation and it moderates the impact of stress responses on health outcomes and stress consequences.

Figure 4: Main and Buffering Effects Model



Discussion

Support was found for H1a and the results confirm that SCS (TLE) can mitigate the effects of the stressors in the students' university experience. Hypothesis 1b was only partially confirmed. SCS (TLE) helps the students in dealing with the stressors via information and instrumental resources. The findings of this study propose that stress borne out of the TLE contributes to symptoms in the South Pacific regional students, thus, interventions by universities aimed at reducing the impact of academic stressors on students health may also be of great importance.

Hypothesis 2a was supported as it was consistent with the findings from the literature that stressors have an impact on stress symptoms. Nevertheless, when the symptoms model was expanded via predictor variables (age, gender, ethnicity, marital status, SCS (TLE) and stressors), the results found only partial support for the single predictor-stressors in the symptoms score (hypothesis 2b). This could possibly be explained by the fact that the study encompassed half as many males as females and this may have added to the difference in the results in comparison to past studies where gender was significant in explaining variances in stress symptoms of the tertiary students (Liu & Lu, 2012). Another contributing factor may have been that over half of the participants in this study were 19–22 years of age, and thus age was also insignificant. If the power of the study were to be augmented, statistical significance may be found. For ethnicity, this construct in the Pacific region may include race, culture, religion and nationality, which impact on a person's identity. There may be many factors tied to ethnicity that could impact student relocation, prejudice or discrimination, cross cultural differences and competency level and lifestyles as well as biological susceptibility levels that could explain ethnic variations in the results.

In the study, SCS (TLE) did not act as a buffer between stressors and stress symptoms (hypothesis 2c). The above results could be attributed to the personality traits of the students, as each student's personality and ability to mobilize resources and support to their advantage varies. The perception of social context and support (TLE) is also subject to change given the progression of the student in their undergraduate years, and although this study has not delved deeper into this dimension of accustoming over time, it is admitted that this could also partially explain the results. Another plausible explanation could be that sometimes adverse factors such as social conflicts, social strains, negative social ties, social hindrances, and such like could hamper the value and significance of the SCS (TLE). This is a decisive factor since students seek social support from both formal and informal means (Highet, et. al 2002).

For SCS (TLE) to play a statistically significant role in mediating the impact of the stressors on stress symptoms, the form of assistance provided via the Teaching and Learning sphere should equal the demands of the stressful events at the University. Furthermore, these regional students are scattered across different campuses and thus, SCS may vary. The variances between local and regional students have not been researched in this study. In the present study, the prospective analysis showed that stress symptoms have an impact on stress consequences and this is consistent with prior studies (hypothesis 3a). Nonetheless, the routine and systematic use of tolerance level and coping strategies as a buffer on the relationship between stress symptoms and stress consequences vis-à-vis overall health was not realized in the study (hypothesis 3b). This could be attributed to the cultural considerations of Pacific societies which as a construct have not been investigated. It is also possible that the students may have

possessed a low level of knowledge about coping strategies and that is why no significant differences were found from the tolerance level variable.

At the institutional level, these calls for more practice based and reflective seminars for instance, stress management seminars potently could contribute in supplementing students in documentation of theirs and others personality styles and patterns of behaviour, affording general information on stress, and ascertaining signs of stress. The stress reduction techniques would then add constructively in consolidating student's coping skills.

With respect to hypotheses 3c and 3d, the sample reported reciprocal relationship between SCS (TLE) and stress consequences and overall health. It also accounted for the maximum variation in stress consequences scores and the model of social context and support as main (direct) effects and stress-buffering (moderating) variable was established. Based on the identification of the stressors that produce the stress symptoms or experiences of the freshmen students, it remains strongly plausible that in situations where SCS (TLE) is consistent with the educational outcomes of the student, the student shall display a greater likelihood of utilizing it to their benefit. This is consistent with Phinney and Haas (2003) and supported in the study.

Conclusion, Implications and Future Research

The outcomes of the current study indicate that the SCS (TLE) has effects on the students and introduces some resilience in the association amid stress symptoms and consequences. For the regional students of the University of the South Pacific, one common factor separating them from others is the culture of 'silence', which also has negative impacts on their well-being. Thus, students need information on psychiatrists, general practitioners, and various specialists. For health practitioners, who may be dealing with these students, there would be cultural differences in the students' perception based on their needs. Thus, a thorough evaluation of students' health care needs and their perceptions is vital. The outcomes of the current study also indicate that coping and tolerance level have not been able to shield the negative stress consequences. The findings point out that instructors and counsellors within the TLE sphere play a noteworthy role in preparing students with stress-management skills so that not only do they have increased awareness but also competency in identifying stressors, symptoms and its consequences and are able to deal with it meritoriously. In this regard, campus seminars could strengthen students' coping skills. Alternatively, it may be significant to compare the support systems and structures within the regional university to be able to diagnose correctly whether the regional students are fully integrated and if its matches their expectations. Only then will mandating an appropriate social context and support via structures and systems, health care facilities and resources and streamlining proficient approaches to cope or manage with stress be productive. In future, this study could be extended and the progression of the students to their second- and final-year studies could be examined. Longitudinal studies of the same nature could also be done and the sample size could be increased via random sampling and other tertiary institutions could be further included in the cross-comparative analysis.

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Facebook in Higher Education: Proposed Model for Sustainable Education in the Faculty of Business and Entrepreneurship (FoBE) at the National University of Samoa (NUS)

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Abstract

This study seeks to elucidate the plausible Higher Education (HE) consequences amassed via Facebook as a tool of HE in the context of the Faculty of Business and Entrepreneurship (FoBE) at the National University of Samoa (NUS). It further expounds on the contests/complications in HE amid the backdrop of sustainable education. Scarcity of research calls for a deliberated narration establishing the prominence of sustainable education. The proposed model is expedient for policy makers, educational practitioners, stakeholders of the university and for governance policy and planning. The outcomes of this study would augment both the international and local literature with scholarship pertaining to themes of bourgeoning prominence in aid of augmenting improvements in HE.

Keywords: Social media, sustainable education, Faculty of Business and Entrepreneurship, National University of Samoa

Introduction

Globally the radical and augmented impacts of Information and communication technologies (ICT) in Higher Education (HE) has not only shifted the landscape of the open and flexible learning milieu but has further delivered voluminous probable and disputing assessments in the context of HE (Legon et.al, 2019; Seaman, et.al 2018). The overall trend espousing open and flexible delivery has been in rejoinder to shifting student demands and the opportunities offered by technology for universities (Naidu, 2017).

Credible assessments from the literature reviews on HE admits fostering didactic improvements (McCarthy, 2010), contending supportive teaching and learning outcomes (Hennessy, 2016), motivating and engaging students and fostering inquiry and investigation (Dzidonu, 2010), eradicating geographical limitations that challenge learning, endorsing differential instruction and enabling greater access for stakeholders (Betz, 2011; Dzidonu, 2010; Hennessey, 2016). This has made education more effervescent and gratifying. The disputing views however, submit the negative impacts on students' learning proficiencies (Lenhart et al., 2010).

Social media which ascends amid the radical transformation of ICTs has become a pervasive wonder and a fundamental part of the social communiqué in the contemporary era. It has infiltrated and realized numerable benefits; nevertheless thoughtful sentiments have enunciated the detriments of social media consumption (Anderson, 2019; Ean and Lee, 2016; Hew, 2011; Lim and Richardson, 2016; McCarthy, 2010; Roblyer et al., 2010).

Social media consumption has advanced immeasurably and social networking apps continue to intensify as communities embrace them into their routine (Kallas, 2020; DreamGrow Digital). According to the Internet World Stats (IWS) (2019), approximately 4.54 billion users are connected to the internet internationally, whilst 68.4 per cent are from the Oceania region. As the accessibility level of tech accelerates in developing countries, the use of computers, mobile devices, and the Internet continues to increase (Poushter, 2016).

Below are the four (4) main research objectives:

1. To identify the number of teaching staff that are using Facebook as a teaching and learning tool in the FoBE at NUS.
2. To measure the effectiveness of Facebook as a teaching and learning tool for staff in the FoBE at NUS.
3. To investigate the challenges of using Facebook as a teaching and learning tool for staff in the FoBE at NUS.
4. To explore the sustainability of Facebook as a teaching and learning tool for staff in the FoBE at NUS.

Literature Review

The landscape of social media has been dominated by the elite "Facebook" (Clement, 2020; Statista, 2020; Lantz-Andersson et al., 2013). Facebook was conceived and hosted into the tech led domain in 2004 by Mark Zuckerberg, a fledgling and striving University scholar from Harvard (Bellis, 2020). The supremacy of Facebook as a trailblazer is discernible from its growing user base; which was at 2.414 billion users in 2019 (Clement, 2020; Statista, 2020), frequency of use which was highest for the Facebook app (Pew Research Centre, 2019) and the amount of time spent on Facebook which logged higher tallies than other apps (Clement, 2020; Statista, 2020). Sterling (2010) discloses that Facebook surpasses Google in terms of online consumption. According to the Citigroup Interwebs analyst Mark Mahaney, Facebook consumption has precipitously increased, whilst a slower rise had been noted for Google, a temperately flat line for Microsoft, a decline for Yahoo, and a serious fall for AOL (Mahaney, 2010). Students are prodigiously utilising Facebook as a social networking tool (Clements, 2015; Cheung et al., 2011; DiVall and Kirwin, 2012; Fewkes and McCabe, 2012; Godwing-Jones, 2010; Hurt et al., 2012; Hou et al., 2015; Kent, 2013; Manca and Ranieri, 2013; Prescott et al., 2015). The prominence of Facebook for students at the high school and tertiary levels is marked by the high usage for educational and social objectives (Gamez, 2015; Kirschner, 2015; Kirschner and Karpinski, 2010; Lantz-Andersson et al., 2013; Qureshi et al., 2014; Wise et al., 2011).

ICT integration for Teaching and learning (T&L) endeavours is not a novel occurrence for the HE sector. Universities have been contending to this for nearly two decades in succession from the 1990s to replace traditional instructional methods and to augment it via tech innovations (Kaware and Sain, 2015; Westera, 2015). Facebook has been used as a supplementary tool in supporting T&L endeavours. Its application ranges from stimulating class discussions, constructing academic content/resources and enabling greater resource sharing. It has afforded greater safety and confidentiality for user groups as well (Bahati, 2015; Bowman and Akcaoglu, 2014; Camus et al., 2016; Clements, 2015; Dougherty and

Andercheck, 2014; Shraim, 2014; Maben et al., 2014; Manca and Ranieri, 2013; Naghdipour and Eldridge, 2016). Current literature advocates that Facebook advances collaborative learning, extends classroom interface and emboldens timid students to partake in the learning process (Camus et al., 2016; Fewkes and McCabe, 2012; Hurt et al., 2012; Kabilan et al., 2010; Kharbach, 2014; Manan et al., 2012).

Facebook also reinforces student engagement (Alshammari et al., 2015; Schindler et al., 2017) and studies scrutinizing the effect of Facebook on behavioural engagement focus on greater membership in learning activities plus collaboration with peers and instructors (Bahati, 2015; Bowman and Akcaoglu, 2014; Dougherty and Andercheck, 2014; Fagioli et al., 2015; Habibi et al., 2018; Rambe, 2012; Staines and Lauchs, 2013). Literature confirms that Facebook is a preferred tool in comparison to other instructional tools by students (Clements, 2015; Hou et al., 2015; Kent, 2013). Returns amassed via Facebook is evident via enriched collaborations, consultations on conjectural and applied problem solving, exchanged scholarship, and articulated sentiments as well as educational victories and trials (Bowman and Akcaoglu, 2014; Dougherty and Andercheck, 2014; Dyson et al., 2015; Maben et al., 2014; Beynen and Swenson, 2016). Other studies affirm higher levels of emotional engagement and raised levels of belongingness (Bowman and Akcaoglu, 2014; Dougherty and Andercheck, 2014; Naghdipour and Eldridge, 2016).

Scholarships on cognitive engagement deliberates that Facebook participation is correlated to educational diligence (Fagioli et al., 2015) and self-regulation (Dougherty and Andercheck, 2014) while other studies show low altitudes of knowledge construction in Facebook posts (Hou et al., 2015). Facebook also supplements lectures (Dougherty and Andercheck, 2014; Nakamaru, 2012; Prestridge, 2014). The inclination towards Facebook consumption has highly been endorsed for its social support and interaction capabilities, (Go et al., 2016; Guo et al, 2012; Neier and Zayer 2015; Rae and Lonborg, 2015; Tang et al., 2016) and as an educational learning tool (Abedin, 2016; Hamid et al., 2015; Kirschner, 2015; Puhl et al., 2015; Udrea et al., 2017). It is further testified that Facebook in HE heightens academic life (Boateng and Amankwaa, 2016), improves student retention (Clafferty (2011) and performance (Barczyk and Duncan, 2013; Hung and Yuen, 2010). Research further purports the positive influence on educational performance (Al-rahmi et al., 2017; Gonzalez et al., 2016) and student achievement in universities (O'Bannon et al., 2013). Literature illuminates on resource detection, explanation and curation (Antonio and Tuffley, 2015), research scholarship dissemination and collaborator recruitment coupled with provision for enduring the affiliation amid institutions and graduates in support of life-long scholarship and alumni support (Carter, 2018).

Scholarships also underline the drawbacks and issues arising from Facebook in the HE context. Hamid et al. (2015) pinpoints that the manner in which tech operates and its extent of integration impacts whether Facebook will payback or weaken the learning and teaching practices in the educational milieu. Czerkawski (2016) says that assimilating social media apparatuses supplements formal education whilst Greenhow and Lewin (2016) highlight the prominence of integration of formal with informal learning. Tadros (2011) on the other hand, summarizes that educationalists need to comprehend the convergence and consequently develop a new way of teaching to fulfil the obligations of the 'net generation' scholars. Integration in practice has been hampered due to several reasons. These include cultural resistance,

pedagogic issues, privacy concerns and institutional restraints (Manca and Ranieri, 2016a, b). Çoklar (2012) contends on the students' attitude and the precision of information regarding Facebook and its impact on the importance rendered to its practice for formal instruction. The author further deliberates over the issue of faculty control over social media and the level of staff involvement (Çoklar, 2012). Researchers (Kabilan et al., 2010; Alt, 2017) ascertain that Facebook may cause inadvertent learning which may deleteriously influence students. Keenan et al. (2018) accentuates on instructors' apprehensions regarding; student professionalism, social media being an interference, alterations to student-instructor relations and a deficiency of time for instructors to acquire knowledge and training on social media consumption and application.

Another study endorses that the incidence of Facebook chats has been deleteriously correlated to academic preparation (Junco, 2012a, 2012b). Studies also highlight the effect of academic procrastination (Nadkarni and Hofmann, 2012; Şahin, 2014). Towner et al. (2011) discusses time as a major consideration for using Facebook and reflects on faculty workload (VanDoorn and Eklund, 2013; Moran et al., 2011). Other scholars discourse on the issues of digital divide, non-familiarity with social media (Keenan et al., 2018; VanDoorn and Eklund, 2013) and generation gap (Jones, 2002). On a similar note Ahmed (2011) posits on the intercultural viewpoints concerning the consumption of social media in HE. Other academics deliberate on stakeholder support and online professional behaviour (Greysen et al. 2010; Prescott et al. 2012). Comparable scholarships have further shown that social networking poses risks such as loss of privacy, intimidation, damaging contacts and more (Alshammari et al., 2015; Livingston and Brake, 2010). Intellectual property issues have also been much deliberated upon in the literature (Henderson et al., 2010; Minocha, 2009). Various other researchers have indicated internal organizational barriers that encumber HE from proficiently and meritoriously integrating new technologies (Linder-VanBerschot and Summers 2015; Westera, 2015). Zhong et al. (2011) discourses on personality traits on the use of Facebook. It is established by the authors that tech savvy users are more likely to spend time on Facebook in contrast to those with lower levels of understanding. Some other investigators have established a positive or almost null association amid grades received by students and Facebook (Capano et al., 2010; Hargittai and Hsieh, 2010).

This research has discoursed on the potential benefits and the barriers to adoption of Facebook as an educational tool. The purpose of this research is to explore the contests/complications in HE of Facebook as a learning tool amid the backdrop of sustainable education.

Methodology

This study has undertaken a mixed quantitative and qualitative research methodology approach. The research conducted an exploratory review of the secondary literature sourced from mainly journals. Primary data was collected using the Google online survey application which has generated mainly quantitative data for this paper. Prior to the online survey, the research had to undergo research ethical clearance through the University Research and Ethics Committee (UREC). Official ethical clearance to conduct the online survey was received by the 20th of November, 2020. The online survey participants were required to voluntarily consent in taking part in the survey in alignment with the UREC policy.

Participants were anonymous and protected via using the shielded question methodology – which is simply avoiding questions that require participants to identify themselves either directly or indirectly. To further maintain anonymity of the study only one (1) of two (2) researchers had access to the online survey raw data results. This was because the survey required participants to provide their email addresses to avoid duplication of input. Overall, the study had a total of twelve (12) questions. Seven (7) of the questions were strategic research questions, while the other four (4) were consent and demographical questions to help segregate the data in terms of age and gender. The link to the online survey questions was sent out to the FoBE staff email addresses on Wednesday 25th November, 2020. The survey was closed on the 5th of December, 2020, giving FoBE staff participants a maximum of only eight (8) days to complete the survey. The collected data from the above questions was analysed using the Statistical Package for the Social Science (SPSS) software and the Google analytical report application.

Growing University and a Growing Faculty

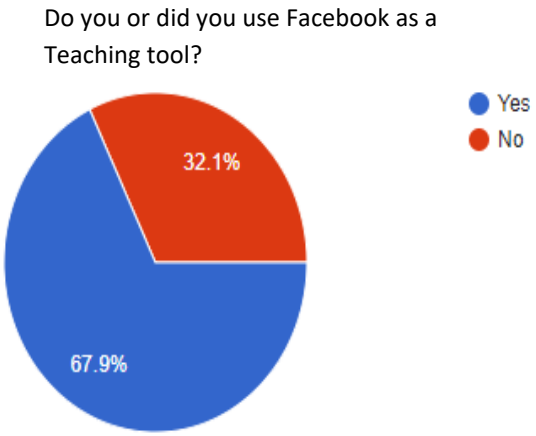
One of the major factors that decision makers of the FoBE have to take into serious consideration to support the idea of potentially adopting a model for using Facebook as a teaching tool is that the University is growing. Since 2013, the NUS staff population has increased from 310 to 400 by 2019 (NUS, 2020). According to the NUS Statistical Digest 2019, the FoBE academic staff makes up approximately 8% of that total figure. The FoBE staff population has actually decreased from its peak overall staff ratio representation of 12% in 2013. What the 2019 digest fails to identify is that to make up for the decrease in staff, FoBE has taken up more part-time lecturers due to the shortage of specialised teachers in country to deliver particular courses. Overall, part-time staff at the University makes up approximately 9% of the NUS total staff population. The majority of that 9% are part-timers from the FoBE and Faculty of Health Science. The considerable high number of FoBE part-time staff is also a supporting point for FoBE to consider potentially increasing its reliance on remote teaching tools and methods such as Moodle through using Facebook. This is because part-time lecturers are either employed full-time elsewhere or retired which means that they are only likely to be on campus during their face to face teaching hours. The majority of part–timer teaching hours are scheduled after working hours traditionally between 5:30 and 7:30pm to cater to the part-timer's availability. In terms of consultation, students cannot access the part-time lecturer's regularly on campus and have a limited window before and after the late classes. The current primary method for student consultation with part-time lecturers is via email which studies have shown increasing evidence of it being outdated, insufficient and out of favor with the current and incoming generations of students (Weiss et al., 2008, EAB Colleges and Universities, 2019; Straumsheim, 2016). This is where Facebook can potentially be that medium between the part-time lecturers and their students. In terms of student population, FoBE has the highest roll growth for the University in the year 2019 taking up a staggering 25% of the total roll growth ratio (NUS, 2020). This is because the FoBE overall enrollment has increased from its lowest of 23% in 2016 to 28% by 2019 of the total University enrollment. The FoBE is also increasing the number of its programmes to cater to the demand and the need for postgraduate level programmes. This means that student numbers are increasing despite a drop in full time staff figures. With the increasing staff and student population and a growing deficit, there is evidence of increasing pressure for FoBE to explore alternative avenues to support its programmes (NUS, 2019).

Fortunately for FoBE, the Equivalent Full-time Student (EFTS) ratio seemed to have dropped from 23% in 2018 to 18% by 2019 (NUS, 2020). It is inevitable that with an increasing student and staff population and depleting resources, the FoBE will have to explore and consider all available and free avenues and tools to assist with the delivery of its programmes, mandates and services.

Survey Findings

From the FoBE academic and teaching staff population of 40 individuals (inclusive of part-timer but exclusive of administrative staff), a total of 28 participants took part in the survey. From the total participants, 76% were female respondents with only 24% male. This figure reflects the wider NUS staff demographics with females making up for 54% of the staff population (NUS, 2020). The majority of participants claimed to be between 30-40 and 40-50 years of age. The dominant senior age percentage of FoBE staff likely had an impact on the 32% of participants who claimed to not use Facebook as a teaching tool. Data from the 32% specifically states that some of the participants have never used Facebook at all. This is quite clear with participant one (1) saying: 'I do not personally use Facebook so I am not in a position to make a judgment'. Participant two (2) states something quite similar: 'I do not use Facebook as a tool so I do not know the pros and cons'. Although some of the participants have never used Facebook at all, there are positive signs that suggest that this group of senior aged staff may be open to experimenting and taking on the challenge of using Facebook to aid their teaching and research. This is clearly evident with the below statement made by participant three (3).

Figure 1: Response on Facebook as a Teaching Tool



"Although I do not use Facebook for teaching, I do believe it can be a potential sustainable teaching tool with a proper system in place…"

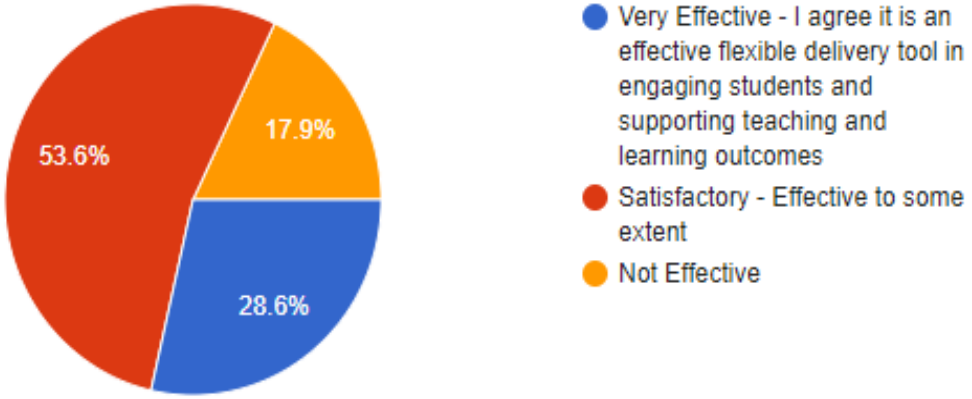
Participant 3 comments

The majority of FoBE staff participants have claimed to have used Facebook for teaching either in the form of communicating with students, organising classes, steering discussion and circulating notes. Although there is a large percentage of FoBE Facebook users, the majority of the participants were quick to identify what they believed from experience were the weaknesses of Facebook in terms of teaching. This is clearly reflected in figure 2 which highlights that only 28.6% of participants found Facebook from personal experience to be 'very effective' for teaching. The majority participants at 53.6% found Facebook

to be 'satisfactory-effective to some extent'. 17.9% of the participants did not support the concept of using Facebook as a teaching tool.

Figure 1: Effectiveness Percentage

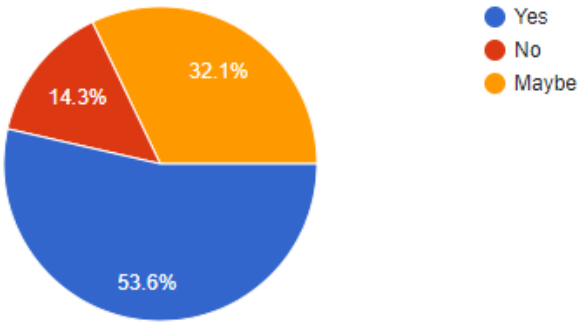
From your own personal experience, how effective is Facebook as a teaching tool?



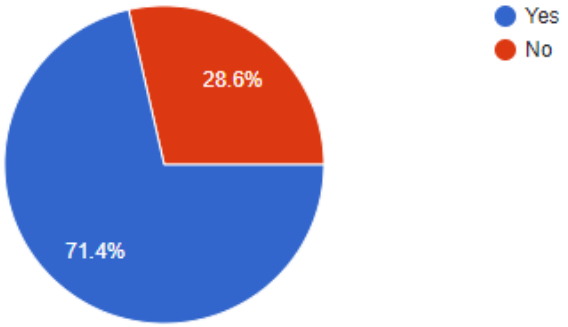
53.6% of participants stated that they would promote Facebook as a teaching tool to others, while 32% were unsure and 14.3% disagreed clearly. However, the overall survey data showed that the participants see great potential in the concept with 71.4% opting to claim that they believe that Facebook is a sustainable teaching tool in the long run. The mixed strings of results suggest that although some of the participants do not support or advocate the concept of using Facebook as a teaching tool, they believe it is viable and are still broad minded to accepting the idea.

Figure 2: Promotion and Sustainability Percentage

Would you promote or recommend Facebook as a teaching tool to others?



Do you think Facebook is a sustainable teaching tool?



Identified Challenges and Strengths of using Facebook as a Teaching Tool

The survey participants have identified a number of challenges and strengths towards the concept of using Facebook as a teaching tool. Challenges are identified below in a sequential order based on the number of times each particular challenge was referenced.

Internet Accessibility

Samoa's current position as a developing nation brings about quite obvious challenges in terms of its internet bandwidth and limited resources. It is believed that students who come from rural areas of Samoa will generally struggle to access Facebook. It was also believed that students from rural areas will have personal limited access to resources such as smart phones or computers at home. However, there is insufficient evidence to support this claim as this is solely based on the perception and assumption of FoBE academic and teaching staff respondents.

NUS Facebook Restrictions

Current internal NUS practices and processes restrict staff and students from accessing Facebook on the University network between 8am to 4pm. This is to strategically limit the online traffic due to the limited bandwidth. Participants have claimed that they have used their own personal resources to access Facebook for teaching purposes. Others stated that they had to wait until after 4pm for Facebook restriction to open for them to access it in order to reach their students.

Line Between Professional and Personal Boundaries (Distracts)

Facebook brings about the potential risk of students and staff over stepping the line between professional and personal communication. Facebook is widely seen as a platform for entertainment and social engagement and could easily be abused by either side of the communication. In fact, there have been multiple studies specifically in this area as it seems to be an increasing problem globally (Persson and Thunman, 2017; Lantz-Andersson et al., 2013). Stephens (2019) in his study suggests that simply providing a system that sets social media boundaries between teachers and students will suffice.

Privacy Breach Risk

Facebook poses a high risk of user exposure to malware, viruses and hacks that may affect the contents under discussion. Facebook also plays host to potential sources of misinformation. Basic awareness programmes and workshops can potentially ease this identified challenge. In addition to the above four (4) challenges highlighted by participants there was a strong argument about Facebook being a supplementary online teaching tool to Moodle. Some of the participants have disagreed with the general notion of online teaching by stating their preference for face to face. Part of this same group has acknowledged that due to their age they are to some extent resistant but are generally supportive to the idea.

Strengths

The strengths of using Facebook as a teaching tool as identified by the participants is chronologically identified below:

Most Popular Social Media Outlet

Participants have claimed Facebook as the most popular social media outlet used in Samoa. This suggests that most students are already on the social media platform. It was argued that teaching methods should keep up with what is trending and cater to the preference of its students.

User Friendly

Students are more comfortable with Facebook in comparison to traditional tools of communication such as emailing. This is because Facebook brings about an informal and inviting atmosphere.

No Need for Training

In comparison to Moodle, Facebook does not require the University to organise trainings or workshops for students and staff as the applications' user friendly interface is easily self-taught. Students or staffs who are not familiar with Facebook can easily access assistance from family members or colleagues.

Increased Student Engagement

Participants have claimed that it is easier to get hold of students through Facebook in comparison to the traditional email which students seem not to pay much attention to.

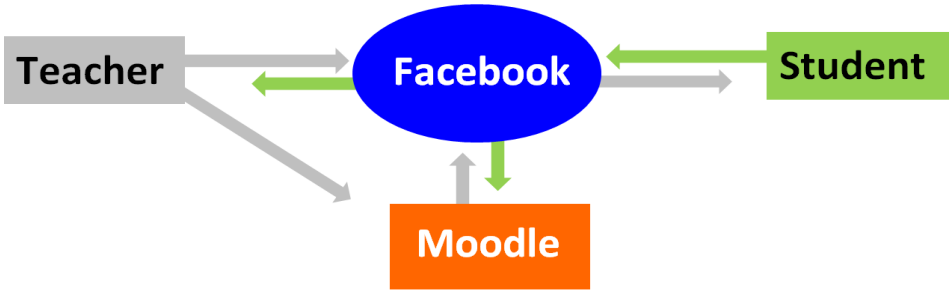
After Hours Engagement

Facebook allows students and teachers to engage well beyond the traditional hours of teaching. Participants have stated that this gives them more flexibility in comparison to the traditional email correspondence.

Proposed Facebook Teaching Model

It is no secret that the Facebook interface was not designed for teaching. This limits Facebook's ability to be the primary teaching tool for online learning. It is therefore proposed that Facebook is ideally a secondary supplementary teaching tool to Moodle. Such as the traditional email, Moodle also seems to struggle with popularity with students. This is particularly found in universities that do not make it mandatory for students and teachers to engage through Moodle or alternative online teaching platforms (Sáiz-Manzanares et al, 2020; Thomas, 2017). Facebook in this scenario could be the medium that helps students engage more between the Moodle platform and the actual lecturer. This could be done by using Facebook as a communication and discussion tool to engage students into Moodle through sharing its link in group or individual messenger chats. The below proposed model attempts to depict and demonstrate this process.

Figure 3: Proposed Facebook Teaching Model



In order for the above proposed model to work, FoBE staff will have to have direct access to using Facebook via the University's network. This will require the University to ease its restrictions on blocking Facebook. The negative effects of Facebook comprise of: lavishness of time and distractions (Fodeman and Monroe 2009) and the lack of formality (Baran, 2010), which were also mentioned by the survey respondents. Thus, there is continuing debate as to whether Facebook should be deliberated as pedagogical tool in HE. The rejoinders from this study's participants propose that FoBE staff see more affirmative features than negative. Notwithstanding the optimistic outcomes that have appeared from the current study, it is prudent to stress that Facebook must be assimilated with thoughtfulness. To moderate the deleterious effects, workshops to create advocacy and policies and guidelines on Facebook needs to be developed for staff and student reference. The current small-scale scholarship advocates that there is need for additional enquiries in this area of higher education. Assimilating Facebook with Moodle, also mandates further research to make a distinction of its practicality in the university context. Based on the findings, Facebook could be useful, but to build a vibrant learning environment, exploring the students' views/perceptions and investigating their digital literacy would be pertinent for sustaining the model.

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Covid-19 Pandemic Impacts on Samoa Economy

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Abstract

Samoa was still recovering from the 2019 measles outbreak and when the Covid-19 pandemic hit hard in 2020, it put more pressure and strain on its economy. The border closures and shipping restrictions, lockdowns, logistic interruptions and quarantine on flights in the Pacific with no exception to Samoa causing severe impacts on the tourism industry, remittance, and international trade. Samoa like any other countries within the region is food import, remittance dependent economies and heavily reliant on tourism industry. The interruption to shipping, product supply chain, tourism and other business activities in Samoa caused a substantial loss to its economy. The current indicators of losses are realized across the national economy like unemployment, business failure, and changed patterns in the production and distribution of food, goods and services. The hindrance to operations in processing, shipping, trucking, logistics, and trading in the country. Samoa is also experiencing substantial falls in remittances since the pandemic outbreak where the transferred of funds from Samoans overseas kin has scaled down. The latest economic update from the Central Bank of Samoa showed its annual GDP drop by -8.6 per cent in the last 12 months, heavily impacted by the complete loss of income to its tourism sector, business activities and product supply chain.

Key words: Covid-19, supply-chain, impact, restriction

Introduction

This paper is about realizing and understanding the impacts of Covid 19 on Samoa's economy and how the country is struggling to afloat and sustain it during this pandemic crisis. It describes the social and economic conditions and challenges faced by Samoa during the Covid-19 pandemic in the last two years. The purpose of the study is to examine the trend of economic hardship encountered by Samoa. It highlights the key economic and social issues fallout from the coronavirus experienced and affected the country and people. Its aim is to help the government, business houses and policy-makers to learn from the hardships and challenges and pave sustainable ways and means to revive and sustain the Samoa economy. The bulk of the information obtained from using the secondary data from journal articles, national strategic plans, government reports and publications by individuals and donor agencies and countries within Samoa and the Pacific. In addition, the authors' knowledge as Samoans natives and experiences provided substantial insights that helped fill some of the gaps in information on the Samoa's economy and business activities generating revenue in the country. The study experiences several problems. The greatest challenge was the availability of information on COVID-19 and its impacts on economic factors in Samoa between 2020 and 2021. The relevance of information, its validity and

conflicting statistics were also of great concern. However, every effort has been made to validate the information contained in the paper and fill in some missing links. Samoa was chosen to be part of this study because the authors have the understanding and knowledge about the economy and social threats by COVID-19 caused to the country. For ease of reference, the paper set the backdrop of COVID-19 as the new phenomenal of the modernity with its impacts and challenges in the Pacific region and Samoa. The study discussed the Covid-19 impacts on economy, businesses and people of Samoa and touch-based on providing alternative suggestions to strengthen and sustain the economy and business activities in times of crisis and challenges.

Covid-19 impact on the Pacific and Samoa Economy

The Pacific regional economy with no exception to Samoa have been very much impacted by the Covid-19 disrupting the trading and marketing supply chain. For most countries in the Pacific including Samoa, shipping represents a doorway to the global economy and a lifeline to social and economic development (United Nations, 2020). The region has made great effort to maintain its ports operational in protecting the transport and port workers. However, the ongoing expected of contraction of production and consumption due to Covid-19 led to a slowdown in maritime trade, shipping demand, port traffic and turnover (UNCTAD, 2020a,b). The response strategy of container shipping alliance that is stopping services on certain routes and cancelling port calling draw setbacks to the flow of trade. This affected countries within the region including Samoa of making the supply of shipping services more unstable. The Covid-19 related restrictions, have caused port congestion and delays in cargo, loading and unloading, undermining the maritime supply chain and connectivity (UNCTAD, 2020a,b; United Nations, 2020)

The small island countries like Samoa remain highly dependent on overseas markets and closely connected to the global economy through global value chains, shipping, and logistics (UNESCAP, 2019). Small island developing states in the region need to adjust and prepare for the post pandemic recovery. The economic fallout strongly impacted Samoa and other small island developing states (United Nations, 2020). Decreased the exports of primary goods due to reduce demand from major importing countries as well as lessen demand of imports in the Pacific region weakened the services of export and import of goods and products (UNCTAD, 2020a,b).

A coordinated response is required for the Pacific region to ensure the continued smooth operation of global supply chains and the health and safety of the shipping related personnel. The current priorities for regional cooperation include coordination of data collection, and analysis of the shipping and port responses to Covid-19 (UNESCAP, 2020a). To enhance regional collaboration to meet the special needs of small islands developing states and support the establishment of regional cooperation mechanisms for response to Covid-19 and future disruptions (UNESCAP, 2020b).

The Covid-19 pandemic is unprecedented socio-economic crisis within the country of Samoa which calls for unparalleled multi-sectoral response in ministries and agencies to protect people and enhance resilience, support economic recovery and restore supply chains and support small and medium entrepreneurships (Central Bank of Samoa, 2021; United Nations, 2020). Shipping is a lifeline link to

Samoa local communities to the regional and global markets and sustaining local social and economic development in the country. Continued efficient shipping and port operations are therefore crucial for short term policy response to the pandemic and for speedy and sustainable recovery in the country. The economic downturn has weighted down on trade flows in Samoa which fell in 2020 and projected uncertainty surrounding any long-term forecast where observers expect global maritime trade to contract significantly (Central Bank of Samoa, 2021).

Samoa and Pacific Policy Response to Covid-19 in Shipping

The need to contain Covid-19 has led to restrictions on the entry and exit of major transport corridors through land, sea and air as well as restricted movement within the countries in the Pacific (UNESCAP, 2020a). Fortunately, Samoa is Covid-19 free, so no restriction imposed on movement within the country. However, Covid-19 impact on the region and the world have affected the supply chain of trade and market into Samoa affecting the economy. Other Covid-19 fallout like passenger transport faced particularly great difficulties due to containment and strict quarantine measures implemented for passengers and transport workers. Restricted entry was allowed only if safety was ensured. Most countries in the region including Samoa yachts, leisure boats and passenger ships have been suspended with a particular striking impact on the cruise ship and tourism industry (UNESCAP, 2020b; Central Bank of Samoa, 2021). Freight transport especially by road has experienced severe interruptions in the delivery of its services.

Although Covid-19 has weighted down on shipping demand and port traffic, shipping continue to play a key role in the global supply chain, transporting all goods, including essential goods, quarantine supply, daily necessities and industrial products (UNESCAP, 2020b; United Nations, 2020). This was crucial in the situation where land logistic were not functioning properly due to land border closures and containment and quarantine procedures. Making the maritime transport crucial to preserve the well-functioning of international supply chain. An initial analysis to Pacific region and Samoa response to Covid-19, showed a great similarity in strengthening quarantine and control over entry and disembark of freight ship by disallowing crew shifts in their own ports, prohibiting crews from landing, prohibiting contact with unloading personnel, and quarantine of crews and ships for 14 days at anchorages (UNESCAP, 2020a; United Nations, 2020). Samoa also introduced measures to facilitate the clearance of goods, especially of essential goods and medical supplies.

Covid-19 Affects Connectivity in Samoa and Pacific

All Pacific island countries including Samoa connected to other regions and global markets solely through air and maritime transport (UNESCAP, 2019). They have declared a state of emergency and stop the actual operation of passenger aircraft and ships in order to contain the spread of Covid-19. These proactive actions have been resulted in moderate level of the Covid-19 infection in the region (UNESCAP, 2019; United Nations, 2020). However, the economic fallout from the pandemic have had a strong impact in the Pacific region and Samoa (Central Bank of Samoa, 2021). The Covid-19 pandemic amplified the inability of shipping services into Samoa due to the delay caused by strict quarantine measures and procedures (UNESCAP, 2020a). The 14 day quarantine rule imposed by most Pacific countries and Samoa on arriving

international ships created disruptions to the normal operation of cargo liner shipping services to the region. Cargo liner services to Fiji, Tonga, Tuvalu and Wallis and Futuna were hardly affected while Samoa, Kiribati, Marshall Islands and Nauru experienced more delay and skipping of port calls (Kean & UN, 2020; Australia Government, 2020). The extended duration for completion of round trip led to reduction in the frequency of port calls and increasing in shipping costs. The vital need and urgency is for the medical community, public health organizations, and policymakers to recognize and address the disproportionate burden that COVID-19 is affecting the Pacific region and Samoa. A priority is for medical and public health outreach efforts in partnership with community-based and faith-based organizations to help reduce and prevent COVID-19 in the Pacific island states (Cha et al., 2021).

Samoa's Economy

The Covid-19 pandemic has increased trading security risks in the Pacific region and Samoa with strict quarantine measures on import and export bans on basic products which have affected all stages of goods and services supply chain. In Samoa, the household food consumption and other product usages have been significantly affected by loss of jobs and income earnings (Singh, et.a 2020). In the formal and informal sectors in the region and Samoa are at high risks due to less employments. In prolonged lockdowns, shortages of labor and input supplies can reduce the scale of crop production while disrupted logistics limit the options of smallholder farmers on better priced markets (Filho et al., 2020). Central Bank of Samoa (2021) second quarterly bulletin said this year started off with contractions in most of the macroeconomic indicators due to the ongoing impact of the Covid-19.

The latest update on GDP for September 2020 quarter showed a decline in the annual Real GDP growth, down to -8.6 percent (Samoa and IMF, 2021). The further decline of the economy is a result of the combined adverse impacts of the Measles outbreak in November 2019 and the global COVID-19 pandemic. The lockdown of international borders, travel restrictions and containment measures were implemented to protect Samoa from the pandemic. Thereby, these measures adversely affected Samoa's local economy (Samoa and IMF, 2021). The economy is now in recession with four consecutive quarters of negative growths since December 2019 with possibility of the economy moving into a depression. By March 2021, it marks one year without international tourism meaning the economy has normalized at a lower level of real GDP without tourism. While Samoa still remained Covid-19 free, the annual growth rate of Real Gross Domestic Product (RGDP) dropped further down in the second quarter of 2021 to -10.3 percent (Central Bank of Samoa, 2021).

The inflationary expectations dropped in the short term with the current weak domestic demand as well as the significant drop in global fuel prices given the impacts of the pandemic. Besides, the risks of natural disasters and climatic changes are constant threats to price stability, especially from the agriculture production prices (Central Bank of Samoa, 2021; Samoa and IMF, 2021).

The banking system at end January 2021 appears to have been well-capitalized as shown by its' capital adequacy ratio of 28.5 percent, while the NPLs of the banking system remains low. However, due to the absence of international tourism due to the effects of COVID-19, this becomes a major challenge

on the banking system (Samoa and IMF, 2021). The banking system needs to work together with its clients and the relevant stakeholders to minimize any potential adverse impacts of defaults on the economy.

Gross official foreign reserves are at an all-time high of $754.05 million at end January 2021, or around 11.7 months of import cover, which is above the Central Bank minimum benchmark of 4.0 months of imports (Kean and UN, 2020; Samoa and IMF, 2021). The high level of official reserves reflect the influx of government's inflows of financial assistance for COVID-19 assistance and major projects. However, with the uncertainty of the effects of the pandemic, there are many factors that could shrink foreign reserves onwards if not managed properly (Samoa and IMF, 2021). The official foreign reserves fell by 1.5 percent, which saw the import cover drop slightly (Central Bank of Samoa, 2021). Hence, the Central Bank continues to monitor and manage the international foreign reserves.

Samoa Monetary Sector

Samoa government's net position with the financial system recorded a deficit of $24.07 million in March 2021, despite a large surplus of $77.17 million when compared to the March 2020 quarter (Central Bank of Samoa, 2021). The rundown of government accounts over the quarter reflects the pickup in government spending. The banking system's average liquidity increased by $24.62 million (8.0%) to $332.71 million in the quarter under review (Central Bank of Samoa, 2021). This reflected an average increase of $27.28 million in the commercial banks' exchange settlement accounts, offsetting a moderate (average) decrease of $9.29 million in their vault cash while holdings of Central Bank Securities remained on hold for a year now. Furthermore, commercial banks' average liquidity was also $17.74 million higher (5.6%) than its position in the March 2020 quarter (Central Bank of Samoa, 2021; Samoa and IMF, 2021).

Due to low risk appetite and slightly higher cost of borrowing, total commercial banks' lending to the private sector and public institutions combined contracted by $11.98 million (1.0%) to $1,172.71 million over the previous quarter or 0.7 percent lower than its level last year (Central Bank of Samoa, 2021).

By industry, reductions were recorded in lending to the 'professional and business services', 'manufacturing', 'other activities', 'transportation, storage and communication' and 'electricity, gas and water' sectors (Central Bank of Samoa, 2021; Samoa & IMF, 2021). As a result of the quarterly drop, the annual average credit growth rate fell further to 1.8 percent in March 2021. In contrast, total lending of the non-bank financial institutions to the private sector expanded by $3.25 million (0.4%) to $805.19 million. This was mainly due to an increase of $7.65 million in lending to individuals and households, offsetting a $4.40 million drop in lending to the business sector (Samoa and IMF, 2021; Economic and Social Commission for Asia and the Pacific, 2020).

Samoa Gross Domestic Product

According to the latest national accounts figures from the Samoa Bureau of Statistics, real gross domestic product (RGDP) in the March quarter of 2021, declined by 0.6 percent and was 7.0 percent lower than that of the same quarter in 2020 (Chen et al., 2020; Central Bank of Samoa, 2021). Accounting for reductions decreases in outputs for commerce, electricity and water, other manufacturing, agriculture,

personal and other service and food and beverages manufacturing sectors. In addition, the annual average growth rate of RGDP up to the March quarter of 2021, fell further to -10.3 percent from -9.2 percent in the December quarter of 2020 (Central Bank of Samoa, 2021). Moreover, the nominal GDP per capita in the March 2021 quarter narrowed by 1.5 percent to $2,496.8 per person (Chen et al., 2020; Central Bank of Samoa, 2021). Similarly, for the twelve months up to March 2021, the nominal GDP per capita decreased by 10.6 percent to $9,936 person.

Samoa External Sector

The balance of payments registered an overall deficit of $5.93 million in the March 2021 quarter, following a $33.2 million surplus in the previous quarter (Central Bank of Samoa, 2021). The gross official foreign reserves fell by $11.2 million to $718.3 million during the reviewed quarter (Central Bank of Samoa, 2021; Samoa and IMF, 2021). The current account balance registered a $102.8 million deficit in the March 2021 quarter, higher than a deficit of $90.0 million in the previous quarter. This expansion in the current account deficit reflected the increase in the balance on primary income deficit as well as a seasonal drop in the secondary income account net (Connel, 2021; Central Bank of Samoa, 2021; Samoa and IMF, 2021).

The COVID-19 restrictions on international borders has adversely affected foreign trade especially through delays in shipment schedules not only to Samoa but other trading ports too. Total export earnings for the first quarter of 2021 fell by 16.4 percent ($3.7 million) to $18.9 million when compared to the previous quarter (Central Bank of Samoa, 2021). This reflects both decreases in domestically produced exports and re-exports in that order. Moreover, total exports were also 24.3 percent ($6.1 million) lower than the same quarter last year. Import payments recorded a 5.5 percent decrease ($12.1 million) to $206.8 million reflecting a reduction in nonpetroleum private sector imports while government and petroleum imports recorded increases of $8.9 million and $2.7 million respectively (Central Bank of Samoa, 2021; Samoa and IMF, 2021).

The prolonged closure of Samoa's international borders to safeguard and protect the people from the deadly Covid-19 pandemic, allowing only repatriation flights solely for returning Samoan citizens (Kean and UN, 2020; Central Bank of Samoa, 2021). It continues to have a serious impact on the tourism industry. As a result, there were no tourist arrivals and earnings recorded for the first quarter of 2021.

Total remittances recorded a seasonal drop of 17.1 percent ($27.7 million) to $134.4 million when compared to the previous quarter and lower than the same quarter last year. This reduction over the year highlighted decreases in funds received from other countries like New Zealand and USA. In addition, total funds received by non-profit institution serving household and others fell by $2.3 million (Australia Government, 2020; Central Bank of Samoa, 2021; Samoa and IMF, 2021)

Samoa - Price Development

The Consumer Price Index (CPI) at end March 2021 recorded an increase of 2.0 percent from the previous quarter of December 2020. This expansion reflected an increase in its imported component by 4.7 percent, outweighing a decline of 0.6 percent in its local component (Central Bank of Samoa, 2021; Samoa

and IMF, 2021). The overall hike reflected importation of goods from 'health' (up by 9.1%), 'food and nonalcoholic beverages' (up by 7.0%), 'transport' (up by 3.7%), 'housing, water, electricity, gas and other fuels' (up by 1.6%), 'alcoholic beverage and tobacco' (up by 1.4%), and 'furnishing, household equipment and maintenance' (up by 0.8%) (Connel, 2021; Central Bank of Samoa, 2021). The annual average inflation rate decelerated to -3.8 percent in March 2021, from -1.6 percent at end December 2020. On an annual average basis, the underlying inflation rate also fell further to -2.1 percent (Central Bank of Samoa, 2021).

Economically, Samoa is reliant on tourism, agriculture, remittances and development assistance. It is highly vulnerable to economic shocks and natural disasters like Covid-19 (Connel, 2021; Samoa & IMF, 2021). The full impacts of the recession will become clear over time, but Samoa is braced for a sharp decline in foreign earnings, private consumption and investment (Australia Government, 2020; Connel, 2021). The private sector is navigating the prospect of loan defaults and bankruptcies. Tourism has fallen sharply where hotels and handicraft businesses were closed for trading (Samoa Tourism Authority, 2021). More than 2,200 workers in the tourism sector are working reduced hours or have been laid off (Australia Government, 2020). Unemployment rates, which have fallen steadily over the last six years are expected to climb sharply.

Discussion

The economic fallout and the disruptions to global production and manufacturing activity as well as changes to consumption and demand pattern need strategic planning to transform the business perspective and environment in Samoa. The immediate impact of the pandemic on air, land and sea transport pose a negative trend in the national economy. The decline in air travel and sea shipment to Samoa causing tremendous impact on the food and supply chain, tourism industry, business activities and remittance in revenue generation for the country.

The growth in trade volume into Samoa is decelerating. The economic impact of Covid-19 infection and spread stem from the prohibition of labor movement and production shutdowns from global and regional importing countries have rippling effects on Samoa's economy. The port volume declined due to reduce demands. The strict quarantine measures and clearance procedures caused congestion at the port and slowdown the flow of goods and services affecting the country's economy. The lay-off workers and less recruitment taking place in both public and private sectors causing greater disadvantage on the national economy.

Samoa and IMF (2021) said Covid-19 affected the employment industry, the travelling and movement of goods and services and the products supply chain of Samoa. The loss of employment and income reduced the products usage and food consumption leaving the vulnerable groups at risk with health problems. The official response to the pandemic included two stimulus packages where the initial response with the UN system in Samoa was to help the government to deal with the immediate health emergency, such as boosting testing capacity through the procurement of necessary equipment and the second is by supporting the health sector.

As reaffirmed by the Samoa Central Bank quarterly report that the government's net position with the financial system recorded a shortfall of $24.07 million in March 2021. An indication of government spending more in keeping its operation, while generating less revenue into its coffers. The Covid-19 disruption and prolong make business houses and public institutions generate less revenue and with the high cost of borrowing from commercial banks reduce the loan to $11.98 million (1.0%) lower than last year. The latest national accounts figures from the Samoa Bureau of Statistics, real gross domestic product (RGDP) in the March quarter of 2021, declined by 0.6 percent.

Despite of the economic fallout Samoa has taken some drastic measures to help sustain its economy. Australia Government (2020) pointed out that Samoa and Australia have an enduring partnership, strengthened by the Pacific Step-up, which focuses on shared labor mobility, governance, trade, development, and security priorities. Samoa early response to COVID-19 and has not recorded any cases, however, global economic lockdown is having significant economic and social impacts on tourism, trade and human capital development. Australia and Samoa are working together to strengthen the preparedness and responsiveness of Samoa's health system and enhance Samoa's resilience to COVID-19 impacts as well as future economic and climate shocks.

Conclusion

The Covid-19 pandemic put forth a strong reminder for Samoa to enhance the regional cooperation to work closely with others in times of disaster. A coordinated regional response is required to ensure continued smooth operation of global supply chain. Maritime shipping and port play a key in the consumption and demand in the supply chain, so need for a more sustainable and resilience shipping and port systems after the aftermath of Covid-19. The regional cooperation in sustaining the flight, trucking and shipping need to focus on the following areas.

- Coordination of the data collection and analysis of the trucking, shipping and flight responses to Covid-19 and their effectiveness on the economic and social impacts.
- Support the establishment of regional cooperation and coordination mechanisms for joint responses to Covid-19 and future disruptions
- Enhance regional collaboration to help address the special situation of small island developing states where they experienced severe economic and social shocks due to Covid-19 pandemic.
- Samoan domestic economy needs to be prepared as country faced challenging times ahead. A fiscal policy be implemented and monetary policy remain accommodative to support the economic recovery in the near term and sustainable economic growth over the medium term.

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Education in Emergencies in Samoa

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Abstract

Crisis-sensitive educational planning has become the norm when COVID-19 pandemic afflicted the educational platform creating chaos in Teaching and learning requiring different levels of reforms. This scholarship provides an overview of the "Emergency Teaching" response based on Reflective practice in the pandemic and further provides a Case Study of the Stimulus package offered by the Faculty of Business and Entrepreneurship at the National University of Samoa as a response to the crisis and identifies the key challenges and benefits of the programme. It further explores the policy and supportive components that are requisite for promoting successful delivery and draws implications for crisis educational planning.

Keywords: Crisis Educational Planning, COVID-19, Faculty of Business and Entrepreneurship, Emergency Teaching

Introduction

The COVID-19 pandemic has caused a massive disruption to the entire education system including universities and the student populace at large. With the restrictive movement policies and advent of the implementation of social distancing, normal Teaching and Learning (T&L) has been incredibly tested. This has further necessitated institutions to transform and implement eccentric strategies. Universities have witnessed a paradigm shift. The online learning/distance education have become a panacea for this unprecedented global pandemic, despite the challenges posed to both educators and the learners and has been used for Emergency Teaching. Transitioning from traditional face to face (F2F) learning to online learning can be an entirely different experience for the learners and the academia, which they must adapt to with little or no other alternatives available. The Higher Education (HE) system and the academics have adopted "Education in Emergency" or "Remote Teaching". There is no one size-fits-all pedagogy for "Education in Emergencies". There are a variety of subjects with varying needs. Different subjects and age groups require different approaches as a response (Doucet et al., 2020). Switching to online learning permits physically challenged students with more freedom to participate in learning in the virtual environment, requiring limited movement (Basilaia and Kvavadze, 2020).

Literature Review: Progresses and Challenges for Educators and Learners

Some of the platforms used so far in Emergency teaching include unified communication and collaboration platforms including: Microsoft Teams; Google Classroom; Canvas; Blackboard; Moodle; Zoom; Skype; Social Media (Facebook, Instagram, Twitter); Apps (WhatsApp, Viber, etc) which have all permitted educators to create educational courses, training and skill development programmes. Chats, video meetings and file storages have kept classes organized and easy to work. Online mechanisms have

also facilitated the tracking of student learning and assessment via quizzes and the rubric-based assessment of submitted assignments (Petrie, 2020). The flipped classroom has availed the learning resources such as articles, pre-recorded videos and YouTube links prior to the classes. The online classroom time has then been utilized to deepen understanding through discussion with faculty and peers (Doucet et al., 2020). This is a very effective way of encouraging skills such as problem-solving, critical thinking and self-directed learning. The virtual classroom platforms like videoconferencing (Google Hangouts Meet, Zoom, Slack, Cisco, WebEx) and customizable cloud-based learning management platforms such as Elias, Moodle, BigBlueButton and Skype have been increasingly used. (ibid).

In assessing the challenges The 'sudden' implementation of "emergency teaching" during the COVID-19 pandemic, increased anxiety level (Ajmal and Ahmad, 2019), stress, and led to depression (Li et al., 2020). It was observed that the new norms in completing the "emergency teaching" sessions were not easily adapted by students and teachers due to readiness issues. According to (Alomyan, 2021) the worst-case scenario expected would be caused by lack of readiness on perceived usefulness of the implementation. Students' psychological readiness towards implementation based on gender, age, field of study, or level of education (Beharu, 2018) were noted in scholarships. The COVID-19 outbreak increased student anxiety, made them less confident to self-manage their courses with less F2F interaction with the lecturer (Elmer and Stadtfeld, 2020; Mantasiah et al., 2021). In addition, the sudden implementation that took place during the COVID-19 pandemic outbreak: seemed to undergo new norms not only for the lecturers but also to the students which sparked negative emotions such as anxiety, stress and depression (Li et al., 2020). Sociological readiness significantly influenced perceived usefulness of implementation by measuring students' learning environment at home, ability to ignore online destruction such as chatting with friends, sending email, doing online shopping etc and adapting to the new norms of online academic learning environment such as preparing online presentation, attending virtual class and performing online assessment (Beharu, 2018).

Methodology

The study utilized exploratory research and depended on scholastic reviews of the literature to explain "crisis educational planning and response in lieu of COVID-19 and its impact on T&L" as well as to comprehend the challenges and progresses. Appreciative enquiry and reflective practice shed light on the assessment of the challenges from which key implications for HE were drawn. As part of crisis educational planning, the Government's Stimulus Package as a Case study was presented. The case study high pointed the benefits, challenges and way forward to comprehend the roadmap which was a response to the pandemic to build resilience in education. Key implications on crisis educational planning are elucidated in the study.

Discussion

Based on the appreciative enquiry approach of identifying good practices via reflective practice and through discovery and design, some of the key assessments pertaining to emergency response as part of crisis educational planning narrated to the following:

- Lack of materials like laptops, mobile phones, and tablets for students' and Lack of a private workplace, unstable home Internet connection, & slack of efficient parental support which impacted students' engagement.
- Accumulation of domestic chores impacting student engagement and performance in course.
- Increased workload for students' and educators leading to greater anxiety.
- Lack of face-to-face contact with the educator making it difficult for some students to understand.
- Absence of practical and field classes.

The Implications for the Higher education institutions (HEIs): Engaging in "Emergency Teaching":

- Assessing Performance of Students in "Emergency Teaching" (lot of factors that interplayed such as student engagement, motivation, readiness as well as instructor variables etc) so Deploying Strategies to Mitigate Dropout was significant.
- Identifying the Student Support, Capacity Building Priority Areas esp for Students & Moodle Training for both educators and students was requisite.
- Using Learning Analytics in Crisis Institutional Planning was paramount.
- Contingency Planning & Ensuring inclusiveness (Gender, Equity, Disability and Social Inclusiveness) was essential.

Figure 1: Case Illustration presented diagrammatically

Case Study: Stimulus Package - Government of Samoa (GoS) through the Samoa Tourism Authority (STA) in collaboration with the National University of Samoa

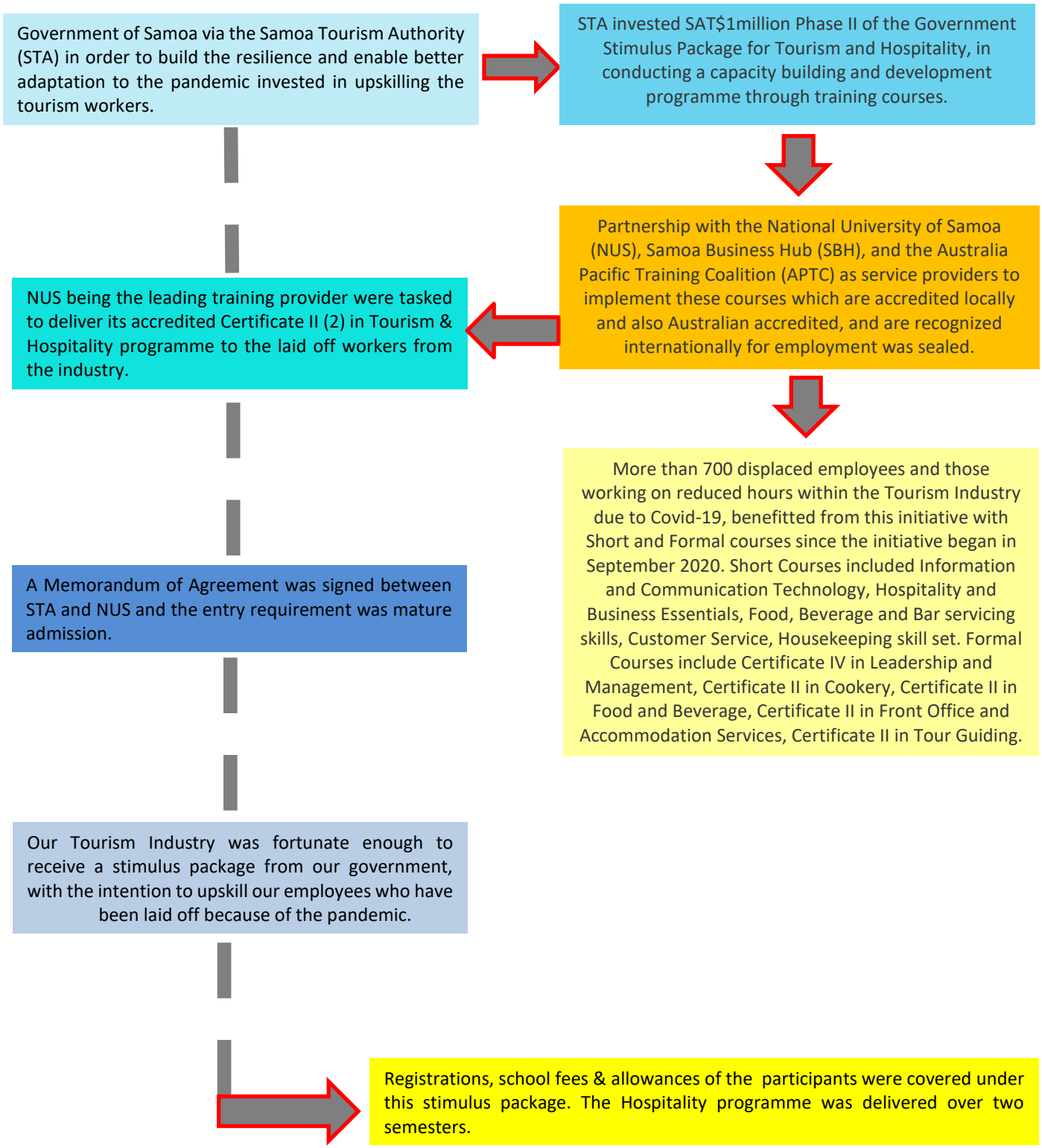
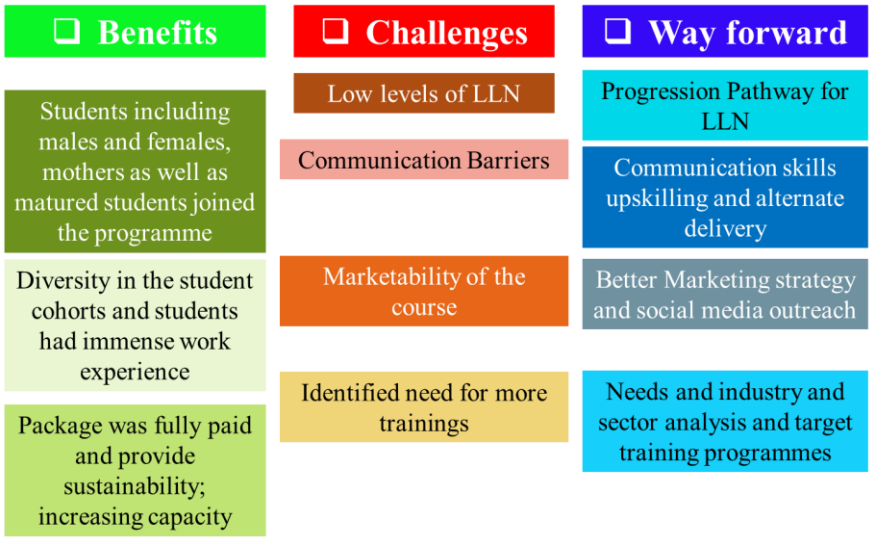


Figure 2: Benefits, Challenges and Way Forward



Conclusion and Implications

UNESCO (2020) deliberated on the significance of crisis educational planning as a response to the pandemic. It must be noted that research demonstrates that most conventional universities and students were not fully prepared for using such technologies leaving them with a range of challenges (Crawford et al., 2020; Prokopenko and Berezhna, 2020). The lesson from the case study and reflections was that crisis educational planning is dependent upon not only international response but local response and strategies to sustain outcomes in the short, medium and long term and to build resilience in education. Assessing the benefits and challenges help minimize the risks in emergency teaching and we are cognizant of our capacity and the requisites in the form of resources. This also helps address GEDSI implications. A coordinated approach such as the Stimulus Package helps accelerate learning and this coordinated partnership serves as a humanitarian, economic and educational development intervention. Crisis educational planning also had implications for contingency planning by the institution in that it requested a response strategy, resources/financing and frameworks for evaluating the impact of the crisis on the emergency teaching. Implications for practice are enlisted as follows:

- Invest in crisis educational planning and contingency planning.
- Setup an institutional framework for evaluating risks, benefits and challenges.
- Drawing data analytics to assess capabilities and leaner and institution dynamics.
- Benchmarking with local practices & benchmarking with international best practices. Sharing practices is essential as well.
- Building the evidence-base through research on many of the issues confronting crisis educational planning, response and reliance outcomes in times of the pandemic (pre-pandemic, during and post-pandemic).
- Developing strong monitoring and evaluation (M&E) guidance and systems to better measure the impacts of the emergency teaching - education interventions and activities from a “resilience approach” and from a “sustainability approach” across multiple periods as well as cross-

comparative data collection and research to substantiate similarities and differences across regions, and to support learning and adaptive management within the HE sector.

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Experiential Learning as a Pedagogical Tool at the National University of Samoa

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Abstract

The supposition by the Lecturers of the National University of Samoa's Faculty of Technical Education Refrigeration and Air Conditioning Courses (RAC) Team has customarily leaned towards the adoption of experiential learning (EL) as a pedagogical tool in linking education and experience, which has set the foundation for a successful transition at the workplace. This scholarship provides the synopsis of the existing practices (curricula, assessments, methodologies and workplace assessment components) and enlightens on the challenges. This scholarship has selected four (4) RAC courses and highpoints the tensions in the curricula. An attempt has been made to pronounce some of the achievements and challenges, the significant learning over the duration of the assignment and how learning experiences during the pedagogical reflection can be transferred to teaching. The scholarship provides implications for experiential learning as a pedagogical tool.

Keywords: Experiential learning, Refrigeration and Air Conditioning Courses, Pedagogical.

Introduction: What is Experiential Learning (EL)?

Experiential learning is a concept that was developed by Kolb in 1984 and is conceived as a paradigm for solving the paradox between how knowledge is gathered and how it is applied. The emphasis of EL is on learning through experience and assesses learners in lieu of their prior experiences (Sternberg and Zhang, 2014). The paradigm emphasizes the significance of learners' participation in all the learning processes and confronts the idea of how experience promotes learning (Zhai et al., 2017). EL is a teaching method that permits learners to learn while they "Do, Reflect, and Think and Apply" (Butler et al., 2019). Students take part in real/tangible experiences (Do), replicating that experience and other evidence (Reflect), fostering theories in line with practices and information (Think), and formulating an assumption or elucidating a problem (Apply). It is a powerful mechanism for creating positive adjustments in academic scholarships which permits learners to apply what they have learned in theory to real-world problems (Guo et al., 2016). This type or form of learning necessitates that learners have greater influence and responsibility, and are absolutely engaged in their learning process inside the learning environment or space. Additionally, it urges learners to be adaptable learners, integrating all feasible learning approaches into a full-cycle of learning, and brings about valuable skills and meta-learning abilities (Kolb and Kolb, 2017).

Literature Review: Importance of EL and Its Benefits for Educators and Learners

EL is a popular teaching method that facilitates active learning by providing real-world practices in which learners' network and analytically evaluate course material and become involved with a topic being taught

(Boggu and Sundarsingh, 2019). Based on the teaching theory of Socrates, this model relies on research-based strategies which permit learners to utilize their classroom knowledge to real-life situations to foster active learning, which consequently brings about a better retrieval (Bradberry and De Maio, 2019). It is proven that EL brings about higher student engagement (Woods et al., 2019). Moreover, via EL, learners become extraordinarily more accountable for their learning which synchronizes a stronger correlation between the learning involvement, practices, and realism (Salas et al., 2009) that are key roles in learning motivation. Huang and Jiang (2020) state that to ensure learners gain the requisite knowledge and actual training, they must be allowed time to develop their know-how and apply it in the real context. This implies more hands-on training and skills development, rather than just imparting the theoretical knowledge (Green et al., 2017). The importance of EL lies in its capacity to accelerate relations between undergraduate scholarship and professional experience (Earnest et al., 2016), leading to an enhanced connection among the university and the industry (Friedman and Goldbaum, 2016) to bridge the gap amid theory and practice.

The positive effect of EL has genuine implications for educators who are thinking of applying this method in their courses. Anwar and Qadir (2017) illuminates on the importance and impetus towards being a member of the learning evolution. By learners' dynamic involvement in experiential activities, the educator can activate their ability to retain knowledge that leads to their intrinsic motivation and interest in the course material (Zelechoski et al., 2017). Learners wholeheartedly contribute in psychological, emotional, and social interactions during the learning process within EL (Voukelatou, 2019). In addition, learners are inspired to think rationally, find resolutions, and take appropriate action in relevant situations. This kind of instruction not only offers prospects for discussion and clarification of concepts and knowledge, but also offers response, assessment, and transfer of knowledge and abilities to new contexts. EL practices have been recognized by Kuh (2008) as contributing to increased student retention and engagement. Other student outcomes often linked with EL include: increased student readiness for self-directed learning (Jiusto and Diabiasio, 2006); self-confidence (Knecht-Sabres; 2010; Lee and Dickson, 2010; Simons, et al., 2012); personal, civic, and professional development (Aldas et al., 2010; Simons et al., 2012); increased working relationships and partnership among faculty and students (Retallick and Steiner, 2009); and experiences that help students acquire work such as professional networking contacts (Hart, 2008; Lee and Dickson, 2010; Simons, et al., 2012). Overall, the positive impacts of EL has implications for both educators and learners.

Methodology

This study follows from an inquiry-based and exploratory approach utilising desk and online reviews of journals and books to comprehend the conjectural underpinnings of EL. The study had selected four RAC courses in the Faculty of Technical Education in which the author has drawn their reflective practice to assess the curricula, methodology and assessments and evaluate the beneficial aspects of EL coupled with the challenges in practice. An attempt has been made to indicate the differences in practice elsewhere.

Discussion

Based on the appreciative enquiry approach of identifying good practices via reflective practice and through discovery and design, some of the key strengths identified in the EL within the four courses were as follows:

- Utilisation of different types of experiential learning such as practicum. Practicum provided the hands-on within the educational setting itself.
- The field experience of the educator which provided a guide to learning over the entire course. Those that were already in the field were engaged in peer assessments and co-practicum sessions to share their prior knowledge and work experiences.
- Constant reassessments: This enabled the class to learn from their experience.
- Experiencing/Exploring ie: "Doing": Learners were performing few sessions hands-on in practicums with little or no help from the educator. This included diagnosing the issues in RAC. A key facet of EL was what the learners learnt from the experience rather than the quantity or quality of the experience.
- Sharing/Reflecting ie: "What Happened?": Within the courses, the educator provided the platform for knowledge sharing and communities of practice whereby the students shared the results, reactions and observations with their peers.
- Processing/Analyzing "What's Important?": The students had the opportunity to discuss, analyze and reflect upon the experience. Describing and analyzing their experiences allowed students to relate them to future learning experiences. They were able to relate how one diagnosis led to a particular solution and how other diagnoses were related.

The key challenges in the four courses included the following:

- Design of the curricula: The curricula itself overlaps and there is a need to revisit the learning outcomes and alignment to capstone courses.
- Methodology and assessment: In the methodology and assessment, educators ought to examine the assessment techniques that assess more than just the skill to remember information.
- Field work experience: The level one and two courses lack field work experience. Field work experiences (work attachments) allow students to explore and apply content learned in the classroom in a specified field experience away from the classroom. This is a useful mechanism in aligning the educational experiences with real work settings.
- Internship Experiences: Internships that can be paid could be useful method of sharing job-related content and availing students and job changers with an opportunity to test the waters in a career field and also gain some valuable work experience.
- Service Learning Experiences: This is EL in which job is performed within the community and there is serious reflection by the student. Service learning involves assisting NGOs, homes and orphanages in repairing RAC components and functions. The key goal is to

ensure that students become aware of good citizenship in learning how to help solve some of society's problems.

- Other Challenges: Challenges in conducting practicum courses are insufficient educational space ie: up to date OSH workshop, lack of resources such as equipment and tools for practicums and lack of reflective practice within the team to debrief learning.

Conclusion and Implications

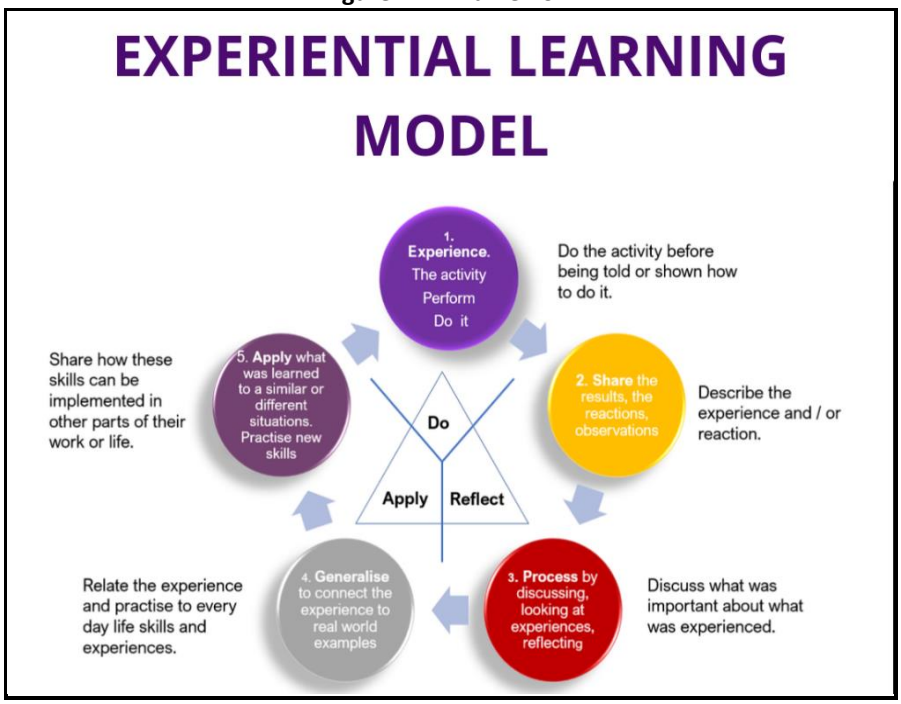
EL has gained recent momentum in the higher education sector. Driving this shift is the acknowledgement that the purpose of 21st century education is to research into how experiential learning processes assist students in constructing academic knowledge and theories, based on previous practical experiences.

As investigated in this study, offering experiential learning opportunities has a positive influence and key strengths have been noted. Given the key challenges based on reflective practice, it is pertinent that educators in designing the educational framework ie: curricula, make EL a key pedagogical tool.

Learners' reflection and assessment are crucial parts to the effectiveness of EL in the learning process. EL ought to be a continuous process that has to be supported through resources and resourcing in place.

The EL framework below is pertinent in application.

Figure 1: EL framework



The implications are that more resources need to be invested for tools and equipment to facilitate smooth transition in the practicum itself. Future research can assess the impact on student learning outcomes and replicate the study across other courses in FoTE. The same study can be replicated in other disciplines to collect cross-comparative data for institutional analysis and pedagogical improvements.

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Covid-19 Impacts Push Samoan Tourism Providers to Localize their Services and Activities

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Abstract

The Covid-19 impacts push the Samoan tourism providers to localize their services and activities to sustain their operations due to travel restrictions and border closures. Samoa Tourism Authority Chief Executive said Samoa like the rest of the Pacific, the tourism industry has drastically affected by the border closures. The tourism providers have up-skilled their workers and upgraded their facilities to prepare for the new normal of travel. However, the prolonged of the pandemic has made the tourism providers to turn inwardly to localize the tourism services, activities and prices of sightseeing sites, hotel facilities, food and cultural entertainments and other activities. To attract the locals to engage and participate in these ecotourism activities to generate revenue to sustain the tourism sector. The lodges, hotels, crafting stores and cultural entertainment centres are advertising their tracking trails, sightseeing sites, food, facilities, artefacts and cultural activities with the local flavour of taste and pleasure for people to visit and enjoy. This is a new shift for tourism providers to undertake and localize the tourism services to generate revenue to afloat the industry during this pandemic disruption. The income decreases in the family households, business houses and tourism sector in the country pushes for new re-emergence of initiatives and trends of how to operate and do the business activities.

Keywords: Covid-19, tourism providers, economic, impacts

Introduction

Tourism, a major industry in Samoa and the Pacific region hit hard by few flights in and out of the region and shipping a doorway to global cruise ships has been very much disrupted (Connel, 2021; Kabutaulaka, 2020). The ongoing expectation to contract the flights, shipping and tourists due to Covid-19 has slowed down the opportunity to generate and sustain the tourism in the country and the Pacific. To slow down the spread of coronavirus in the region has grounded tourism to a halt, and the number of unemployment in the tourism and affiliated sectors have spiked (Filho et al., 2020). The rates of generating less revenue for the tourism sector in Samoa is increasing. The communal living, economic growth, and supply and value chain have been very impacted by the Covid-19. The negative impacts causing vulnerabilities on the livelihoods of local communities in both the formal and informal sectors (Gounder, 2020; Filho et al., 2020).

Such hardships have driven the individuals, tourism sector and business houses to reinvent the will of soul searching to generate revenue opportunities. There came the re-emergence and formalization of

new ideas and trends to localize the tourism services and activities. Besides, the establishment of partnership to trade, market and exchange goods and services within the regional territories through social media platforms (Finau and Scobie, 2019). Two such platforms emerged namely the Facebook group pages L-Barter which launched in Samoa early this year, while the Barter for a Better Fiji launched in April in Fiji (Boodoosingh, 2020; Siutaia, 2020; Connel, 2021). A Samoan mother used Le Barter with another Samoan mother to exchange baby clothes and nappies. This bartering system taking place within these two countries interfacing with cultures that support reciprocity and history that predates the use of cash.

The utilization of social media to practice barter system is fascinating to juxtaposition of the old with the new (Boodoosingh, 2020; Finau and Scobie, 2019). The online platforms to engage, publicize, trade and barter with the territorial nations is a new phenomenon popping up in the region due to the Covid-19 fallouts.

Since the tourism sector is at halt, the bartering systems and other business activities using social media are interfacing and replacing the tourism activities to generate money during this border closures period in the region. Samoa tourism operators are on the whirlwind tapping into pull factors to attract the locals into taking part in the tourism activities (Boodoosingh, 2020; Connel, 2021). Opening the lodges and hotels facilities and amenities for families, couples and kids to use with reasonable prices. The local cuisine and dishes with sea food and Samoan flavour with affordable prices are cooked and open-invitation circulated to households and families to pay a visit and taste these dishes. The tracking trails are cleared and cleaned for interested local hikers and explorers to venture into the refreshing scenic environment around Upolu and Savaii. Alternatively, take a car ride around Upolu or boat ride to Manono or even ferry to Savaii to explore and see the traditional relics and cultural activities. The Samoa tourism sector is upgrading reef resources, control waste management, prevent leakage of water tanks in low lying areas. To sustain the environment and revive the traditional culture to draw locals to participate in the tourism activities (Connel, 2021). The tourism sector and providers are collaborating to enhance the tourism sphere of influence and attraction by using the resources sustainably, reducing waste, maintain biodiversity, integrating tourism into planning, supporting local economies and training tourism workers (Connel, 2021; Economic and Social Commission for Asia and the Pacific, 2020).

This study discussed the COVID-19 impacts on tourism industry in the Pacific and the challenges affecting the tourism providers. Also highlighted the Covid-19 fallouts on Samoa tourism services and activities resulting in no generation of revenue and unemployment on the livelihood of individuals, family units and stakeholders. It assessed and narrated the localization initiative of tourism sector in Samoan and evaluate how the local residents perceive and participate in this new trend. It provided discussion on how this new shift and trend came about to sustain and afloat the tourism providers services and activities in Samoa. In addition, how this platform initiative would attract the locals to participate in it since no foreign tourists and travellers are coming into the country. It ended with a concluding summary.

COVID-19 Impacts on Tourism Industry in the Pacific

Pacific Small Island Developing States (SIDS) have health care systems with a limited capacity to deal with pandemics, making them vulnerable to the economic and social impacts of the coronavirus pandemic (Filho et al., 2020). The health care systems within the region not prepared to respond positively and effectively to the pandemic, couple with inadequate water and sanitation treatment plus the influx of visitors from countries where the virus was active provided fertile ground for the spread of the virus within the island states. The small Pacific island states share similar challenges, including limited resources, dependence on international trade, remote locations, fragile ecosystems, and susceptibility to natural disasters. French Polynesia was among the first Pacific SIDS to report COVID-19 in mid-March 2020, followed by Guam, Fiji, New Caledonia, Papua New Guinea (PNG) and Commonwealth of the Northern Mariana Islands (Filho et al., 2020). By early April 2020, the WHO reported 192 confirmed cases and five deaths. The small island countries within the region serve as the tourists and travellers hub generate much revenue into the economy of each state.

To address the limited capacity of health care in Pacific SIDS, the WHO developed a six-month Pacific Action COVID-19 Preparedness and Response plan to reduce the virus spread and treat infected patients (Filho et al., 2020). The plan includes response activities such as screening passengers at major checkpoints, requiring potentially exposed persons to undergo at least 14 days of quarantine, and closing entry to non-residents. When Action COVID-19 Preparedness and Response was implemented automatically restrict the international and regional tourists and travellers to the small Pacific island nations (Filho et al., 2020). The screening passengers at major checkpoints, 14 days of quarantine and border closures impact their entire tourism industry in the region. The connectivity to small island nations is essential to economic development because they depend heavily on tourism, imports, and financial grants. For example, in Fiji, tourism accounts for nearly 40 percent of its gross domestic product and approximately 37 percent of directly or indirectly employment comes from the tourism sector (Filho et al., 2020).

The international flights within the region were reduced like Fiji Airways reduced 99 percent of its international flights (Filho et al., 2020). Followed by the suspension of domestic flights and other air-carriers also suspended travel to Pacific Island nations. International tourist cruise ships prohibited indefinitely from docking in Fiji and other Pacific SIDS. The ramifications are rippling through sectors that support the tourism industry, including agriculture, transportation, retail, lodging, food, and recreation (Filho et al., 2020). The prolonged to border closure within the region drastically reduced the GDP and increased the unemployment. The consequence of tourism stoppage is likely to cause an economic recession in Pacific SIDS. Other business activities help to boost and sustain the economy also are hindered by the Covid-19. The fishing contributes to the Pacific Island economies but the supply chain have disruptions, restrictions on international sales of fresh fish, and boat crew health issues related to the virus (Filho et al., 2020). Foreign financial assistance can help mitigate the adverse economic consequences in Pacific SIDS. Increased international cooperation and public–private partnerships to supply necessary medical supplies, promote stability and have an open trade policies. To address the economic instability (Eric, 2020).

The COVID-19 pandemic crisis has pushed the global economy into a deep recession. It has adversely affected trade, tourism, commodity and financial markets, global value added and supply chains (goods or services), and economic growth (Eric, 2020). Although only Fiji and Papua New Guinea have recorded cases and deaths, economic disruptions are severe hitting the region nations' tourism sectors makes. The tourism sector make the largest proportion of gross domestic product (GDP), of direct and indirect employment, and of foreign exchange earnings. Since border closures and international travel restrictions have halted tourism states, the economies of the small islands developing states (SIDS) have been impacted by a contraction in consumer and investor confidence, and global value chains (Eric, 2020; Pacific Trade Invest, 2020).

Tourism sector development is one of the key strategies for economic growth established in Fiji and Vanuatu as a vital source of business, investment, employment, and entrepreneurial activities (Gounder, 2020). These nations have mobilized the tourism industry as a key player to create prosperity for sustainable development. In considering the impact of COVID-19 on the tourism sector (World Travel and Tourism Council, 2020).

Covid-19 Fallouts on the Samoa Tourism Activities

The COVID-19 pandemic knows no borders resulted in the nationwide negative economic and social impacts in the formal and informal sectors. Currently there is no Covid-19 cases or deaths in Samoa but its effects has caused fallouts destruction to the national global gross domestic product (GDP) of the country (Duffin, 2020). The national economic recovery dependent entirely on international and regional trade partners and the disruption to shipping schedules, port calls, cruise ships and flights impacting the public and private sectors. The main goods and services supply chain has been disrupted along with border closures and travel restriction has hindered the tourism activities, business houses trading and other generating income activities (Economic and Social Commission for Asia and the Pacific, 2020). The adverse economic impacts have been significant affected a large portion of the economy dependent mainly on micro, small and medium enterprises (MSMEs) in the tourism and services sectors. The MSMEs make up the majority of Samoa's economy with small and medium enterprises alone comprising an estimated 88 per cent of all Samoan businesses (Samoa Tourism Authority, 2014). Samoa's real GDP contract by 8.6 percent in last 12 months having severe negative impact on employment and business confidence in the country (Central Bank of Samoa, 2021).

Since the onset of the pandemic, entrepreneurs have faced declining sales, liquidity, cash flow challenges and workers layoffs amid a climate of uncertainty about the business ability and tourism survival. The small and medium enterprises like tourism operators are encountering difficulties to generate revenue to service their debt obligations (Economic and Social Commission for Asia and the Pacific, 2020). The local tourism industry and its operators faced greater resilience issues than other business enterprisers because they depend heavily on tourists and travellers and with border closures and restrictions affected their operations. The tourism operators do not want to take risk of borrowing given the unpredictability of the current economic environment (Central Bank of Samoa, 2021). Even the

commercial financial providers are not really comfortable to allow the enterprisers and tourism operators to seek loans.

In 2019, Samoa was hit by the measles outbreak resulted in the declaration of a state of emergency with the cancellation of public gatherings, schools, holiday-related events and more than 80 deaths (Economic and Social Commission for Asia and the Pacific, 2020). A mass vaccination effort was done in the end of 2019 and early 2020 and brought the outbreak under control. The emergence of COVID-19 threat gave no room for the country to recover. As a result of both the Covid-19 and the measles outbreak adversely affected the Samoa's GDP contracting to 8.6 percent by the second quarter of 2021 (Central Bank of Samoa, 2021).

The Samoa's private sector is facing the following potential challenges – the disruptions to international and regional supply chain reduced the demands in both the domestic and overseas markets leads to decline in businesses' revenue generations, gross operating profits and cash flow (Eric, 2020). The disruption to internal and external supply chains reduced the commodity prices affected the agriculture sector. The tourism industry continued to be severely affected last year and this year resulting in widespread economic fallouts (Ministry of Finance, 2020).

The reduction in remittance inflows also negatively affected the consumer spending. In April 2019 total remittance was WST 40.25 million (USD 15. 2 million) and in April 2020 the total remittance inflow was WST 36.74 million (USD13.9 million), representing a decline of 7.2 per cent (Central Bank of Samoa, 2020). The ongoing problems for indebted businesses managing loan repayments have negative consequences on both the financial providers and the borrowers. The negative impacts on the profitability of commercial finance providers making them tightening the credit measures for smaller businesses.

The Samoa Chamber of Commerce and Industry conducted a business survey in 2020. According to the survey 19 percent of the businesses were unable to continue operating, while 66 percent of businesses reduced business hours to cut costs and keep some staff, and 70 percent did not expect the businesses to survive if the Covid-19 restrictions remain in place (Samoa Chamber of Commerce and Industry, 2020). Significant numbers of staff layoffs in the business sector especially in the tourism industry and its associates in 2020. A total of 253 men and 186 women were made redundant, and a further 211 men and 212 women were forced to take leave without pay. The most affected employee age groups were between 20 and 40 years old as the employers are reluctant to lay off their older more experienced workers (Samoa Chamber of Commerce and Industry, 2020). The total unemployment levels increased by 0.4 percent in the first quarter of 2020 (Samoa Chamber of Commerce and Industry, 2020) and likely would have gone up this year, 2021.

The microenterprises producing handicrafts to sell to tourists from overseas and supply agriculture products to exporters are experiencing reduced in sales. Tourist and travellers arrivals have virtually ceased and most hotels, lodges, guest houses have been dormant for almost two years now (Economic and Social Commission for Asia and the Pacific, 2020). Many microenterprises do have small loans that require regular repayments, and those involved in small retail outlets will face inventory and ongoing store overhead costs. The majority of informal businesses also have limited access to financial services or

government business assistance (Central Bank of Samoa, 2021; Economic and Social Commission for Asia and the Pacific, 2020).

The small and medium enterprisers and tourism industry have significantly affected by the COVID-19 pandemic. Income losses and ongoing costs such as rent, wages of key staff and loan repayments have depleted their cash flow. The SMEs are more vulnerable to external shocks and more prone to fail in such crisis like this pandemic and sad to say the significant decline in the survival and performance of SMEs have serious implications on the Samoa's economy (Samoa Chamber of Commerce and Industry, 2020). SMEs account for approximately 75 per cent of private sector employment and are crucial suppliers for important commodities, goods, and services, based on the definition of an SME as an enterprise employing between two and 25 people (Samoa Bureau of Statistics, 2020; Economic and Social Commission for Asia and the Pacific, 2020).

The Samoa Tourism Authority Chief Executive Officer said 52 hotels have been closed while 48 are still in operational out of the 144 hotel operations in Samoa (Ligaiula, 2021). A survey by the Samoa Tourism Authority on employment in tourism sector revealed that a total of 3877 jobs have been affected since the onset of the COVID-19 pandemic last year (Ligaiula, 2021). Tourism sector decline started towards the end of 2019 with COVID-19 getting a big blow to tourism in the country when borders shut. The tourism employment survey showed that 68.6 per cent of direct employment had been affected in some form with 48 per cent getting laid off since December 2019. During the pandemic era, the number of those who were fully employed stood at 1774, laid off workers 2706 while 1171 were in the reduced hours' group (Ligaiula, 2021).

New Shift and Trend to Localize Samoa Tourism Sector

The hardships and challenges by the Covid-19 hit hard the local tourism industry (Filho et al., 2020). The tourism businesses and operators have small loans that require regular repayments and without tourists and business travellers coming into Samoa will end up in closing down their businesses (Economic and Social Commission for Asia and the Pacific, 2020). In doing so, they will incur huge cost on the loans to repay. Therefore, the tourism businesses and operators reinvent the will and shift for revenue generation opportunities. There came the re-emergence of new ideas and trends to undertake and facilitate to localize the tourism activities, facilities and amenities for locals to participate in them to generate revenue. The tourism operators are advertising their hotels, lodges, guest houses, beach fales and beaches, tracking trails, cultural activities and dances, local dishes and cuisines, surfing gears, facilities and amenities with reasonable prices (Boodoosingh, 2020; Connel, 2021). They are inviting the local people to taste, participate and enjoy them in these range of activities. With such intention and drive coming on board where the tourism operators and their associates are localizing the tourism trends and adventures (Connel, 2021; Theuns, 2014). The Samoa tourism earns the economy over $300 million a year where government cannot ignored this revenue making industry (Samoa Chamber of Commerce and Industry, 2020).

Therefore, attention and support given to this segment of the industry. The necessary short term remedial measures and the current economic challenges pressure Samoa government to secure external support to address the core constraints that have affected tourism industry and other small and medium entrepreneurs' growth in the long term (Economic and Social Commission for Asia and the Pacific, 2020). The Government of Samoa introduced practical immediate measures to assist the private sector to weather the current economic turmoil. Clients, particularly women clients in tourism industry and other business entities facing difficulties meeting repayment obligations after this additional period are to be further assisted with workout strategies (Economic and Social Commission for Asia and the Pacific, 2020; Connel, 2021).

A capital injection into Development Bank Samoa to provide support for clients (tourism operators and other small and medium entrepreneurs) facing difficulties especially in technical support to upgrade the staff business project assessment and delinquent account workout management skills. This technical support will assist Development Bank Samoa to manage non-performing loans and strengthen its overall loan portfolio. A concessional loan to South Pacific Business Development earmarked for additional and extended small and medium entrepreneurs' credit will benefit a range of business activities including tourism (Economic and Social Commission for Asia and the Pacific, 2020). An immediate technical and financial support from Development Bank Samoa to roll out their revised women-focused microfinance scheme of business and tourism activities in all parts of the country (Connel, 2021; Economic and Social Commission for Asia and the Pacific, 2020). Also the reallocation of the remaining funds in the Samoa Agribusiness Support Program to the Samoa business hub to help the business industry (Economic and Social Commission for Asia and the Pacific, 2020).

Many tourism operators and small and medium entrepreneurs will need to re-schedule their debt obligations and some will require re-financing packages that will be difficult to secure from commercial financial providers (Central Bank of Samoa, 2021). So the Development Bank Samoa to provide this support but before mobilizing funds for such processes, the bank need to provide both additional funding and technical support to carefully vet and structure the credit packages. While such measures will be beneficial for borrowers, bank liquidity and capital reserves need to be considered so risk mitigation approaches and measures need to be considered prior to undertaking this initiative (Economic and Social Commission for Asia and the Pacific, 2020).

These short term remedial measures from the Samoa government encouraged the hotels, tour operators and other tourism providers to localize the industry to strengthen their operations (Connel, 2021). The tourism operators and providers created the opportunities for locals to access and utilize the resources available in the hotels and tours for reasonable prices. Apart from localizing the tourism this year, an initiative launched in 2017 called the Foundation for a Sustainable Samoa – which was the travel philanthropy fund (Samoa Tourism Authority, 2017).

This initiative mission was to maximize community benefits from tourism in Samoa by creating opportunities for local people to improve their well-being and safeguard their natural and cultural resources. The Foundation is dedicated to support small-scale destination stewardship initiatives that

contribute to the following four sustainable pillars: youth career development, environmental education, community economic development, and waste management (Samoa Tourism Authority, 2017). This program created a new funding mechanism for projects in need of financial assistance where the fund will raise awareness for the travellers and residents on the key environmental and social issues facing the islands (Samoa Tourism Authority, 2017). The fund will inspire collaboration from stakeholders to effectively solve social and environmental problems to highlight Samoa's commitment to sustainability.

Raising awareness for tourists and residents on environmental and social issues around the country and in the absent of international travellers due to Covid-19 the tourism operators and providers are doing awareness through social media platforms inviting locals to take part in the tourism activities and utilize the facilities and amenities in hotels and lodges (Connel, 2021). The hotels and lodges are cooking sea food local delicacies and dishes for families and residents to taste some traditional cuisines.

While the government, tourism providers, stakeholders and other business entities are tapping into new ideas and trends to sustain the businesses and national economy – the mid to long-term support measures to address the key hurdles barring the re-emergence of a vibrant small and medium entrepreneurs sector also need to be considered too (Economic and Social Commission for Asia and the Pacific, 2020). The government is also up-skilling the tourism employees who have been laid off so they can do other informal business activities while staying at home.

Data Collection

This paper uses a desk research approach synthesizing existing data sourced from the internet, journals, newspapers, government archives and social media platforms (McNaughton et al., 2021). Much of the data gathered are from the government and non-government archives and these archives contain verifiable information provides useful insights on varying degree of Covid-19, economic and tourism research contexts in the Pacific and Samoa. The annual reports, plans and other documents serve as the research data information too. Also, information collected from academic published articles from international and regional journals on the Covid-19 impacts on the global and regional economic performances.

The current information on the Covid-19 and its impacts on the social and economic sectors in the Pacific region and Samoa and its fallout in the tourism industry were seriously analysed and assessed. This study assimilates this large pool of online data on tourism in Pacific and Samoa, but cautious measures were applied to use the authentic sites. The study organizes, collates and analyses these previous research data onto this research context to valid and expansion the discussion and conclusion on the Samoa current tourism trend (Sun et al., 2021).

Discussion

The Samoa Tourism Authority Chief Executive Officer said 52 hotels have been closed while 48 are still in operational out of the 144 hotel operations in Samoa. From the 52 hotels, 26 of them are currently being used by the Government to quarantine returning citizens and residents. A survey by the Samoa Tourism

Authority on employment in tourism sector revealed that a total of 3877 jobs have been affected since the onset of the COVID-19 pandemic last year. Tourism sector decline started towards the end of 2019 with COVID-19 getting a big blow on tourism in the country when borders shut.

The tourism employment survey showed that 68.6 per cent of direct employment had been affected in some form with 48 percent getting laid off since December 2019. Figures shown in the survey indicated that the total workforce before the COVID-19 pandemic and the measles epidemic was at 5651. However, during the pandemic era, the number of those who were fully employed stood at 1774, laid off workers 2706 while 1171 were in the reduced hours' group.

The accommodation sector, food and beverage and car rentals felt the impacts of the decline with all losing more than half of their employees and jointly contributed to 88.5 per cent to overall job losses. With the current situational challenges and turmoil Samoa is facing in regard to business operations and activities - the government is doing its best to sustain the economy and control the Covid-19. The government prepared the citizens and residents by vaccinating them in case the Covid-19 comes into the country. Samoa government conducting a COVID-19 mass vaccination for two days in September 2021 to boost the coverage to reach 99 percent vaccinated population to protect the families, communities and country. The Ministry of Health vaccination teams, district hospitals, villages, women and men worked with communities to every residence to do the vaccination. Individuals who are unable to be vaccinated are pregnant mothers, patient who are bedridden, individuals with weak immune system and allergic to vaccine.

The Samoa government, donor partners and New Zealand government are assisting the Samoa tourism sector to localize the tourism services and activities. They are publicizing destination marketing and direct marketing for properties in Samoa. The Samoa Tourism Authority and tourism providers are doing a lot of marketing on social media, including Tafaoga and Kuka documentary series to let people know what tourism can offer in terms of its potentials in the country. To attract the local residents and international tourists by chance go fishing, go golfing, go hiking, eat Samoa traditional delicacies and cuisines. The tourism authority and tourism providers are collaboratively together to harness and sustain the tourism by pushing ecotourism.

They are promoting the nature walks, forestry, waterfalls and reefs areas around Savaii. While in Upolu, they are marketing Moataa mangrove protected areas, Palolo deep, kayaking sites and fixing Masamasa trail for hiking and trekking. The tourism authority and providers believe that local market can always substitute and help the tourism sector in one way or another.

Conclusion

The Samoa tourism sector has been very much affected by the Covid-19 impacts with the closure of the borders. The closure of borders gave a big blow by shutting up 52 hotels, 3877 jobs have been affected, laid off workers 2706 and 1171 were in the reduced working hours. These fallouts have financially impacted the individuals, family units, tourism sector and the national economy of Samoa. The decline in tourism revenue, shutting down of tourism businesses and laying off workers have forced the Samoa

government, donor partners, New Zealand government, Samoa Tourism Authority and tourism providers to promote and localize the tourism services and activities to the local people and the residents.

These concerned partners are collaboratively providing financial assistance, upgrading tourism skills, advertising ecotourism, promoting traditional cuisines and delicacies, cultural activities, facilities and amenities with the local price tags. The tourism authority and tourism providers are using social media platforms, print media, radio and television to publicize ecotourism like natural walks, waterfalls, coral reefs, mangrove areas, diving spots, kayaking sites and hiking and trekking trail. Also advertising the local food and cultural activities like fire dance, hula dance and other traditional artifacts for local customers to taste and enjoy.

The shift into localizing tourism with good marketing strategies likely would help sustain some of the tourism providers to continue to operate, create job opportunities for the locals and contribute to the national economic growth. The re-emergence of this initiative is the way forward to sustain and maintain the tourism services and activities locally with affordability prices and flavours.

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Performance Management in the New Normal

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Abstract

Performance management is one of the key areas that has been hugely impacted by the pandemic COVID-19. This study is an exploratory study that has delved into investigating the role of performance management. Managing remote workers and management of the challenges coupled with key implications for future research are delineated.
Keywords: COVID-19, new normal, performance appraisal, performance management, challenges.

Introduction

The COVID-19 pandemic has caused a massive disruption to various sectors and performance appraisal is one key areas that has been hugely impacted as workers moved their physical workspaces to virtual work spaces as a result of the shifting work requirements due to the pandemic. With the restrictive movement policies by Governments globally and the advent of the implementation of social distancing, the new normal mandated different challenges, and ways of managing performance appraisal. This scholarship is an attempt to explore the challenges and elucidate on the management strategies in the new normal in performance management.

Literature Review: Performance Management Key Challenges in the New Normal

COVID-19 and its influence on performance appraisal has been echoed in the literature (Balani, 2020; Chatterjee, 2020) and scholars stress that the role of human resources within an organisation in stimulating guidelines, guidance, enhancing strategies and implementing supportive structures is significant (Balani, 2020) ie: through performance management.

The pandemic has altered work arrangements and due to social distancing, workers have opted for remote work conditions (Verbeemen et al., 2020). Nevertheless, there have been numerous organisations that have defied the evaluation of employees' performance in remote conditions, stressing that many employees have been challenged via remote work (McIlvaine, 2020). Scholars have deliberated on supportive infrastructure to cushion the impact of COVID-19 on job performance (Mcillvaine, 2020), as well as the need for worker flexibility (Aldogan et al., 2021; Mayer, 2020; Mihus et al., 2021).

The changes brought about by the COVID-19 pandemic also resulted in a shift in employee prospects regarding evaluation and successive remuneration. During COVID-19, many organizations endeavoured to design and redesign their remuneration system to meet the real needs of employees (Aldoghan et al., 2021).

Rudolph et al. (2020) study deliberates on work stressors escalating during the pandemic which influences work performance. Erlina (2020) and Dwivedi et al. (2020) highlight that the biggest challenge

facing leaders in today's organizations is how to develop a culture of employee engagement and leveraging it as a driving force for performance (Govender and Bussin, 2020).

Performance management is a continuous process of detecting, assessing, and expanding the performance of individuals and workgroups and aligning performance with the strategic goals of the organization (Aguinis, 2019).

Performance appraisal is one element of performance management. Leaders/managers in the new era are like "cop on the beat" and in order to get the employees cart across, they need to steer forward by driving performance. Scholars state that employees are the very engines that drive the activities of organizations to attain goals.

This pandemic has had a profound impact on employees, raising anxieties and doubts, leading to stress and depression (Ariawaty, 2020; Opatha, 2020).

Scholarships prove that the pandemic has impacted employees' performance and wellbeing and it is prudent for leaders and managers to maintain frequent contact with their employees and the significance of communication should not be underscored (Gandhi, 2020; Wigert and Barrett, 2020).

Methodology

The study utilized exploratory research and depended on scholastic reviews of the literature to explain "performance in lieu of COVID-19" as well as to comprehend the challenges. Key implications based on the reviews are elucidated in the study.

Discussion

Based on the literature reviews the significance of performance management cannot be underscored. Generally speaking, the pandemic has swung the pendula both ways where some workers have been "displaced" whilst others have been struck by "work from home" options, and therefore worker performance has been impacted by a number of variables during the crisis. This pandemic maybe seen by some as a crisis at the same time as a revolution for others. However, the risks posed to employees cannot be overlooked.

Human capital is viewed as a stock and this stock needs to be capitalised on through social capital. Performance management requires enhanced communications, teambuilding and engaged leadership, self-reliance and resilience, empathy, trust building, mental models and systems approach coupled with an agile/adaptive approach. It is noteworthy to bear in mind that fixating on certain metrics to assess or appraise performance and neglecting the impact of the pandemic may lead to a biased evaluation and mediocre performance management system. It is prudent to consider one's teams approaches to communication and complex thinking processes.

Goal-setting in the pandemic would be quite distinct in comparison to prior the pandemic. Managers have to be meticulously diligent in framing goals with an "agile mind-set" and the social feedback system should be instituted to avail feedback to the employees in the pandemic.

Conclusion and Implications

In conclusion, it is significant for organizations to re-evaluate aspects of their performance management system to better respond to the current context of their organizations. Performance management can be a daunting experience, however failing to be agile and adaptable in application of performance management processes and systems in COVID-19 in vacuum without a participatory and planned intervention will lead to failure.

Thus, proper HR and managerial planning is critical for success of interventions in the pandemic. Future research can be based on empirical data sets and thus, the topic can be investigated and strengthened through primary data collection and expanded to different sectors.

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Student Performance in Mathematics in the Pacific Senior Secondary Certificate (PSSC) and the Samoa Secondary Leaving Certificate (SSLC) Examinations from 2006 to 2019: A Critique Analysis

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Abstract

This paper discusses the student performance in Year 13 mathematics in Sāmoa over the 14 year period from 2006 to 2019. It is based on archival data of the official results of the Pacific Secondary School Certificate (PSSC) 2006 - 2012 and the Sāmoa Secondary Leaving Certificate (SSLC) 2013 - 2019 national examinations. The analysis finds that the assessment methodology in mathematics by where all students in all disciplines are assessed by the same topics even though some of the topics are more difficult or irrelevant to their field of studies. The paper argues that to fix the low student performance in mathematics the assessment methodology should be changed. The teaching and assessment of college mathematics especially Year 12 and Year 13 should be streamlined into major maths and basic maths rather than the general-mathematics-for-all approach. The streamlined to place good students in mathematics to take major maths while the below average students to take the basic maths. This would clearly show the real ability and performance of students in mathematics and provide a better way to monitor and assess the students overall performance and rating in the maths national examinations.

Keywords: mathematics, trend, assessment

Introduction

The research paper assessed and analysed the Pacific Senior Secondary Certificate (PSSC) and Sāmoa Secondary Leaving Certificate (SSLC) mathematics examination results from 2006 to 2019. The year 13 national examination called PSSC was usually set by The South Pacific Board for Educational Assessment (SPBEA) in Fiji until 2013. From 2013 to now the examination is locally set by Samoa and called the SSLC. This paper discussed and shared the progressions, obstacles and challenges encountered in the last 14 years with the PSSC and SSLC national examination results. Mathematics is useful and indispensable in life, yet it is the least preferred subject due to the mathematical formulas, methods of calculations, deductions, set of theories, and applications are not easy. The maths in PSSC and SSLC national examinations has low pass rates. This study analysis rejects the ability of students to grasp the course content or the technique and methodology of teaching the lessons as the major problem. However, the study found that the assessment system of mathematics subject was and is the main issue.

In Samoa, the year 12 and year 13 students are studying the entire maths course which is unfair and hard for the weak students in mathematics. It should be better to divide the maths course subject into major maths and basic maths. The major maths to have topics like concepts in numbers, algebra, geometry, trigonometry, probability and statistics and calculus, while the basic maths to have decimals, fractions, graphs, integers and rational fractions, measurements, number series, percent, simple algebra, powers, exponents and roots. The students taking science subjects of biology, chemistry and physics do

major maths, while others in arts, commerce and general courses to do the basic maths or general maths. Then the SSLC should set two national examinations papers for major maths and basic maths. Only then, a clear average rating marks for SSLC mathematics exam would be shown for how well or poor the students are performing. Currently all students in year 12 and 13 are studying only one mathematics course and sitting one mathematics national exam paper. In doing so, the weak students in maths who are struggling are pushing the average marks of mathematics down. So in the last 14 years the results of PSSC and SSLC examinations are not good - showing more poor performance of the students. Since the college students are streamlined into four major disciplines of arts, commerce, general and science in the mid-1990s, so the maths course should have been divided into major maths and basic maths.

Without doing so, the mathematical assessment continue to have negative effects on students' performance. This issue needs to be addressed before looking at other factors affecting the students' performance like the syllabus contents, delivery of lessons, parents' support, and student study environment. For ease of reference, the paper set the backdrop of importance of maths in the day-to-day and work, the method of data collection, the research findings and discussion and conclusion.

Mathematics Significant and Relevant to Life

Humans are the most intelligent beings where mathematics helps them to understand the world and provide an effective way of building their mental discipline. Math encourages the logical reasoning, critical thinking, creative thinking, abstract thinking, problem-solving ability, and effective communication skills (LaMar et al., 2020). Mathematics is a powerful tool for global understanding and communication that organizes the humanity and prevents chaos. Mathematics plays a vital role in all aspects of life, whether in everyday matters such as time tracking, driving, cooking, or jobs like accounting, finance, banking, engineering, and software (Boaler et al., 2018). These functions require a strong mathematical background, and scientific experiments by scientists need mathematical techniques (Arthur et al, 2018). They are a language to describe scientists' work and achievements. As for mathematical inventions, they are numerous throughout the ages. Some of them were tangible, such as counting and measuring devices. Some of them are not as tangible as methods of thinking and solving. The symbols that express numbers are also one of the most important mathematical inventions (Boaler and Selling, 2017).

Mathematics helps in analytical thinking. While solving math problems, data are collected, disassembled and then interconnected to solve them. Mathematics helps to develop the ability to think, helps explain how things work, helps to develop wisdom, increases the speed of intuitive, helps to make the child smarter, important in a constantly evolving world and provides exploration and inventions opportunity to the humanity (Altay et al, 2017). Mathematics is the pillar of organized life for the present day. Without numbers and mathematical evidence, we cannot resolve many issues in our daily lives. There are times, measurements, rates, wages, tenders, discounts, claims, supplies, jobs, stocks, contracts, taxes, money exchange and consumption. In the absence of sorting and arranging these things through mathematical calculation the society will interface with confusion and chaos (Selbach-Allen et al., 2020).

The mathematics has become the companion and support of humans since their existence on planet earth. First human wanted to answer the questions of "How many?" that person invented math (Barbagallo et al., 2018). Then algebra was invented to facilitate calculations, measurements, analysis, and engineering. The science of trigonometry emerged when humans wanted to locate high mountains and stars. The knowledge of mathematics developed when human felt the need to plan, count, subtract, multiply, calculate and understand the day to day life and activity (Mulwa, 2015). Mathematical rapprochement is necessary for any process, so anyone wants to reach the height of life, should not ignore and disregard the mathematics (He et al., 2021).

Mathematics is deeply related to the natural phenomenon, the way to solve many secrets of nature. Mathematics is necessary to understand the other branches of knowledge. All depend on mathematics in one way or another. Without mathematics the science and art would not be understood well, as it is the key to other disciplinary studies (Selbach-Allen et al., 2020; He et al., 2021). The discipline and mastery of any science or art are very much related to the size of mathematics. The most valuable thing in math is using it in everyday life. No one can play any entertainment game without using numbers or practice any sport without using numbers or work without using numbers or enter the store without using the numbers or organizing players without using numbers Arthur et al., 2018; Altay et al., 2017). The importance of mathematics is that it is a method based on research and analysis, to reach the desired results, and is used for calculation and presentation of data; not only the use of this science in a particular field but the use of all areas of life and different sciences (Boaler and Selling, 2017).

Why Students Find Mathematics Difficult?

Gallup in 2005, conducted surveys asked the students to specify the subject name that they find the most difficult. Unsurprisingly, maths is the subject that students find the most difficult. Why students find maths as a nightmare? Math is a very abstract subject (Cevikbas and Kaiser, 2021). For students, learning usually happens best when they can relate it to real life. In the early years of school the students are required to learn the fixed and standardized formal procedures and rules of mathematical methods like add, subtract, divide and multiply numbers (Forslund et al., 2021).

This is where students stray from mathematical mind-sets. As math becomes more advanced and challenging, that can be difficult to do. As a result, many students find themselves needing to work harder and practice longer to understand more abstract math concepts. Dyscalculia is a learning difficulty that causes students to struggle with formulas, shapes, and number-related concepts (Sekao and Engelbrecht, 2021). This makes it difficult for them to understand and process math problems. These students usually fall far behind their peers in math and have trouble with number-related problems that do not improve with ongoing practice. Students with math anxiety do not simply dislike math (Boaler et al., 2016).

For them, math causes debilitating feelings of fear and failure that hurt their ability to perform. The pressure and lack of confidence make these students feel when faced with math causes their brain to freeze and forget the things they do know. Math challenges are not always a result of a learning difficulty (Boaler, 2008).

For many students who struggle with math, it is because they do not have the proper foundation needed for success (Nurnberger-Haag et al., 2021). Math is a cumulative subject where everything builds on what came before. The students need to know the basics before they move onto new topics. If the students start to fall behind in one area, it can be very difficult to make sense of advanced concepts without understanding the foundational knowledge (Makhubele, 2021). Math is not something that students automatically understand it. It takes time and practice to understand math. Since many students do not enjoy math, getting them sitting down and practice can be a struggle. Without practice, students struggle to understand because they do not know how to handle and comprehend the basic math (Watanabe, 2021).

For many students, math is a subject where they simply memorize concepts and formulas without really understanding them (Akhter and Akhter, 2018). This may work for a while, but as they progress and encounter more difficult problems, many find that they do not know how to solve them because they do not have the problem-solving skills they need to tackle these new problems (Sekao and Engelbrecht, 2021).

This leads them to losing interest, confidence and falling behind from math. When students expect math to be difficult, they quickly give up when they do not understand something (Watanabe, 2021). A negative mind-set quickly turn into a cycle of low confidence, less motivation, and poor performance (Sekao and Engelbrecht, 2021).

Mastering Maths Requires Efforts

Our brains develop important neural pathways for processing information and mathematics plays an important role in brain development and analytical skills (Li and Schoenfeld, 2019). Understanding mathematics and arrive at the logical solutions will able to prepare the mind to deal and handle the real problems. In capturing critical and analytical skills will help the person to live well in this chaotic society, so mastering math is crucial for living. Mastering mathematics required math teachers to understand and know different applications and strategies to motivate and drive students into establishing and having mathematical mind-set (Boaler et al., 2016).

The brain develops important neural pathways for processing information so it is no surprise that mathematics plays an important role in brain development and analytical skills. When students are able to understand mathematics and arrive at the logical solutions, they will be able to prepare their minds deal and handle real problems. The neuroscientific evidence shows that the human brains have enormous capacity to grow and change at any stage of life (Boaler et al., 2016). Sarah Flannery, who won Europe's Young Scientist of the Year Award in 1999 for inventing a new mathematical algorithm, talks about the way she developed her mathematical thinking from working on puzzles at home with her dad. These puzzles were more important to her than all of her years of math class (Boaler, 2008).

Math to see it as a broad landscape of unexplored puzzles in which students can wander around asking questions and thinking about the relationships (Boaler, 2008; Foster, 2022). This will develop their inquisitiveness to learn and know more about mathematics. When students see mathematics as a set of

ideas and relationships and think about these ideas, they have a mathematical mind-set. The best and most important way is to encourage students to play with numbers and shapes, thinking about what patterns and ideas they can see (Mainali, 2021). They approach math with the desire to understand it and to think about it, and with the confidence that they can make sense of it. Successful math users approach math with a mathematical mind-set, knowing that math is a subject of growth and that their role is to learn and think about new ideas. The mathematical mind-set needs to be instilled into students from their first experiences of math to motivate and draw their attention into liking and exploring mathematics (Sachdeva and Eggen, 2021).

Schools are responsible for the graduation of creative students capable of development in all aspects of life. There should be a strong relationship between studying mathematics and increasing creative thinking where teachers give the students opportunity to think creatively in classroom (Mulwa, 2015). Providing an effective environment for thinking in classroom like order of students, type of questions, clarity of the lesson, effective feedback, relationship of teacher and student, good exchange of communication and information will establish a good learning environment for mathematics (Mainali, 2021; Foster, 2022). Such setting will pull and create discussion in the classroom and give the opportunity to students to share their ideas, experiences, skills and knowledge with each other (Boaler et al., 2018).

Methodology

A longitudinal study of correctional research involved looking at the Pacific Senior Secondary Certificate (PSSC) and Sāmoa Secondary Leaving Certificate (SSLC) mathematics examination results from 2006 to 2019. The longitudinal quantitative data analysis simply means analysing data that is numbers-based – or data that can be easily "converted" into numbers without losing any meaning (Danioni et al., 2021). The quantitative analysis is generally used for three purposes. It is used to measure differences between groups, to assess relationships between variables and to test hypotheses in a scientifically rigorous way (Albers, 2017). The quantitative data analysis used these three purposes through analysing numbers where all involved statistics. The statistical analysis form the quantitative analysis and can vary from basic calculations like averages and medians to more sophisticated analyses like correlations and regressions (Abuhamda et al., 2021).

The statistical analysis has two main branches of statistical methods that are descriptive statistics and inferential statistics (Abuhamda et al., 2021). In research descriptive statistics can be used or both descriptive and inferential can be used depending on trying to find and identify the subject at hand (Knottnerus and Tugwell, 2018). In this research both the descriptive and inferential statistics were utilized where the data set of sample inferences about the year 13 students' population. The inferential was utilized to make prediction and establish explanation about how well the year 13 students performed in the PSSC and SSLC mathematics national examinations from 2006 to 2019. The inferential statistics connect the dots and provide explanation and predication on the mathematics examination results for year 13 students based on the observation sample data. The inferential statistics used in this analysis to test the hypotheses that predict the differences in the year 13 examination results.

Sampling

The quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. It focuses on numeric and unchanging data and detailed, convergent reasoning rather than divergent reasoning. The quantitative research method of numerical analysis data was used by collecting and analysing the official archival data of examination results from Pacific Secondary School Certificate (PSSC) 2006 – 2012 and the Sāmoa Secondary Leaving Certificate (SSLC) 2013 – 2019. It is the same national examination where it used to be called PSSC till 2012 when its name changed to SSLC.

Data Collection

An average of 70 percent of the Year 13 student population or around 1200 students who sit for the national examination each year studied mathematics. The purposive sampling was used where all year 13 students who sit 2006 to 2019 national examination were used. The intention and the purpose of the study is to identify how well the year 13 students are doing in the mathematics national examination compare to other subjects. The setting of year 13 examination, sitting for the examination, collecting examination papers, marking them and entering into the computer then this pre-existing data from the Ministry of Education, Sports and Culture was extracted and analysed. The overarching issue to classify the features, count them, and construct statistical models in an attempt to explain what has been collected and observed.

Data Analysis

The examination results from PSSC 2006 – 2012 and SSLC from 2013 – 2019 from accounting, history, geography, economic, biology, chemistry, physic, English and mathematics were analysed and average passing rates put into table and put into graph to see how well year 13 students performed each year in each subject from 2006 to 2019. The failure average rates was also analysed and put into table and put into graph to see how year 13 students performed each year in each subject from 2006 to 2019. Each subject was graphed to see how many students passed or failed from 2006 to 2019. Total number of math students enrolled into each discipline namely commerce, arts, science and general was analysed and put into table from 2006 to 2019, then their enrolment was graphed to see it clearly.

The maths passing rate of students in each discipline was analysed and put into table from 2006 to 2019 then graphed to show how many passed. While at the same time the failure rate of students in each discipline was analysed and put into table from 2006 to 2019 then graphed to show how many failed. A graph developed for each discipline from 2006 to 2019 showed how many students in that discipline passed or failed mathematics examinations.

Findings

The findings analysed and explained the PSSC 2006 – 2012 and SSLC from 2013 – 2019 examination results in accounting, history, geography, economic, biology, chemistry, physic, mathematics and English. It

further looked at how good or bad students in each discipline of commerce, science, arts and general have performed in mathematics national examinations from 2006 to 2019 then focused primarily at math subject of how many year 13 students passed and failed their examinations.

Figure 1:PSSC and SSLC Passing Rate from 2006 to 2019

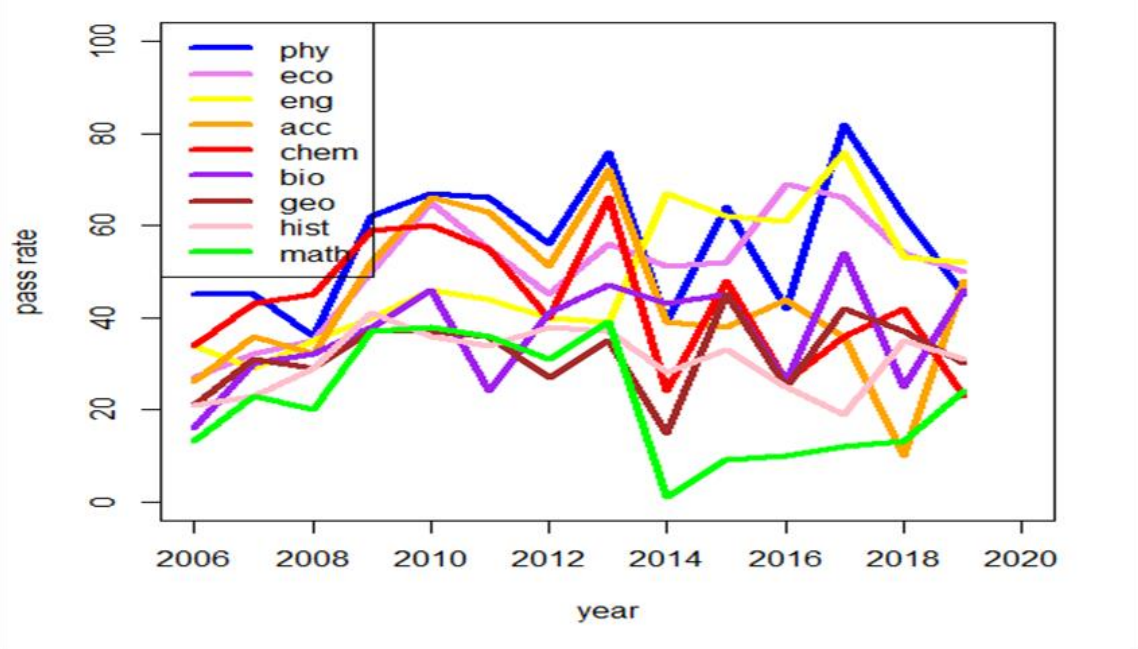


Table 1: PSSC Passing Rate from 2006 – 2019 and SSLC Passing Rate from 2013 - 2019

	PSSC (2006 - 2012) & SSLC (2013 - 2019) pass rate (%)													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
physics	45	45	36	62	67	66	56	76	39	64	42	82	62	45
economics	27	32	35	50	65	55	45	56	51	52	69	66	54	50
english	34	29	35	40	46	44	40	39	67	62	61	76	53	52
accounting	26	36	32	52	66	63	51	72	39	38	44	36	10	48
chemistry	34	43	45	59	60	55	40	66	24	48	26	36	42	23
biology	16	30	32	38	46	24	41	47	43	45	26	54	25	46
geography	21	31	29	37	37	36	27	35	15	45	25	42	37	30
history	21	23	29	41	36	34	38	37	28	33	25	19	35	31
mathematics	13	23	20	37	38	36	31	39	1	9	10	12	13	24

The figure 1 and table 1 indicates year 13 students do not perform well in mathematics national examinations as it shows from 2006 to 2019 where the math ranked the lowest in the graph and table compare to the other eight subjects. The passing rate of mathematics national examinations in the last 14 years ranged from 1 to 39 percent. In 2013 mathematics passing rate hit 39 percent and in 2014 it hit the lowest passing rate of 1 percent.

The history and geography are other two subjects that year 13 students not doing well in them with the passing rate of 19 to 41 percent and 15 to 45 percent respectively in the last 14 years. The physics with 36 to 82 percent passing rate, economics with 27 to 69 percent passing rate, while English with 29 to 76 passing rate. The year 13 students are doing pretty well in the national examinations in these subjects.

The accounting with 10 to 72 percent passing rate, biology with 16 to 54 percent passing rate, while chemistry 24 to 60 percent passing rate. The year 13 students are fairly doing well in these subjects in the national examinations in the last 13 years.

The graph, however, slashes down in 2014 especially mathematics national examination where year 13 students poorly performed to hit the passing mark of 1 percent. All the other examination subjects not well either with the exception of English and Economics with their passing rate of 51 and 67 percent. From 2014 to 2019 maths national examinations passing rate remain low at 10 to 25 percent passing rate which categorically in the failure mark. From 2014 to 2019, physics 39 to 82 percent pass rate, Economics 50 to 69 percent and English 52 to 76 percent meaning the year 13 students doing exceptionally well.

While History 19 to 35 percent passing rate, geography 15 to 45 percent passing rate, biology 25 to 46 percent passing rate, chemistry 23 to 48 percent passing rate and accounting 10 to 48 percent passing rate. The year 13 students did not do well in the national examinations in these subject areas in the last five years.

Figure 2:PSSC and SSLC failure rate in 2006 to 2019

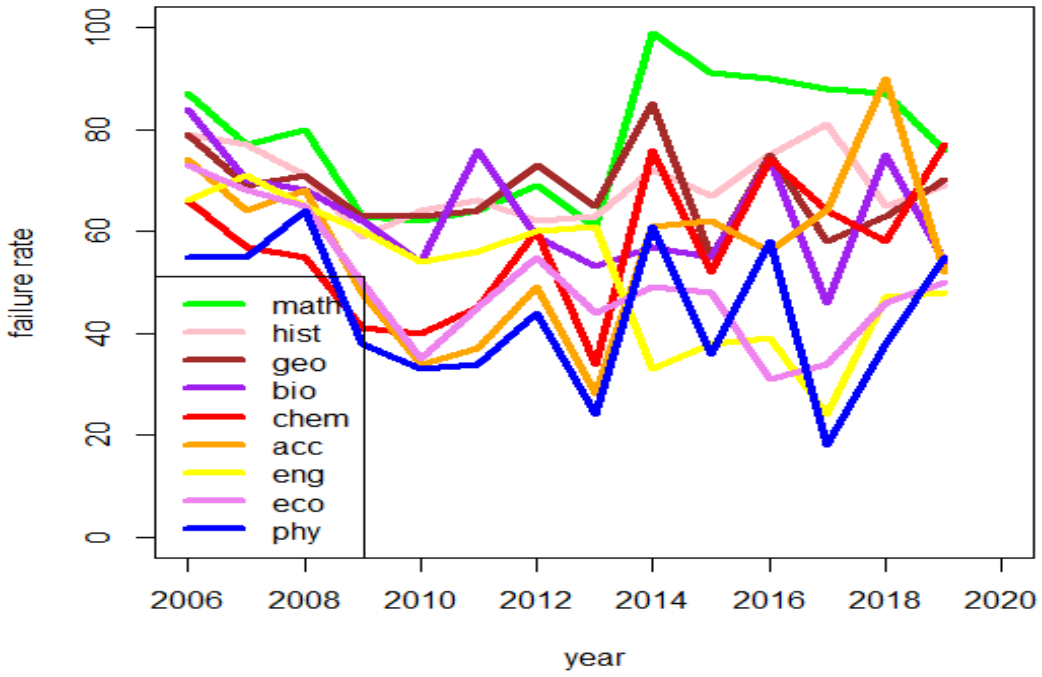


Table 2: PSSC 2006 – 2012 and SSLC 2013 – 2019 Failure Rate

	PSSC (2006 - 2012) & SSLC (2013 - 2019) failure rate (%)													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
mathematics	87	77	80	63	62	64	69	61	99	91	90	88	87	76
history	79	77	71	59	64	66	62	63	72	67	75	81	65	69
geography	79	69	71	63	63	64	73	65	85	55	75	58	63	70
biology	84	70	68	62	54	76	59	53	57	55	74	46	75	54
chemistry	66	57	55	41	40	45	60	34	76	52	74	64	58	77
accounting	74	64	68	48	34	37	49	28	61	62	56	64	90	52
english	66	71	65	60	54	56	60	61	33	38	39	24	47	48
economics	73	68	65	50	35	45	55	44	49	48	31	34	46	50
physics	55	55	64	38	33	34	44	24	61	36	58	18	38	55

The figure 2 and table 2 clearly show that mathematics national examinations from 2006 to 2019 by year 13 students has the highest failure rate of 61 to 99 percent in the last 14 years. History and Geography have the second highest failure rate with 59 to 81 percent and 55 to 85 percent failure in the national examinations in the last 14 years. Next is Biology with 46 to 84 and Chemistry with 34 to 77 percent failure rate in the national examinations from 2006 to 2019. Follow by Economics with 31 to 73 percent failure rate.

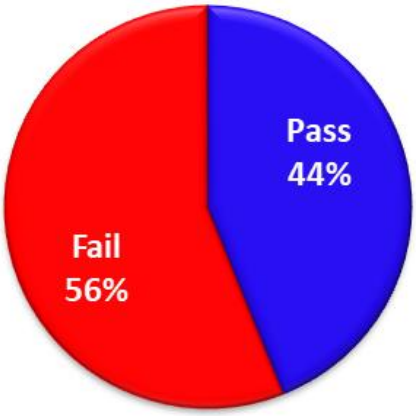
The graph and table illustrate clearly that Accounting, English and Physics national examinations have lower rate of failures from 2006 to 2019. The Accounting with 28 to 74, English with 24 to 71 and Physics with 18 to 64 percent failure rate. This means the year 13 students did fairly well in the national examination in these subject areas. The graph shows that between 2006 and 2008 the nine courses have high rate failures ranged from 55 to 87 percent.

From 2009 to 2013 the rate of failures of all the nine courses increased and ranged from 24 to 76 percent. Within this period, Biology, in 2011, went up to 76 percent, while in 2012 Geography reached 73 percent while the failure rates for the other seven courses ranged from 24 to 65.

The failure rates of mathematics from 2006 to 2019 in the year 13-Maths national examinations are very high as shown in figure 2 graph and table 2 which ranged from 61 in 2013 to its worst failure rate in the 14-year period under review of 99 percent in 2014.

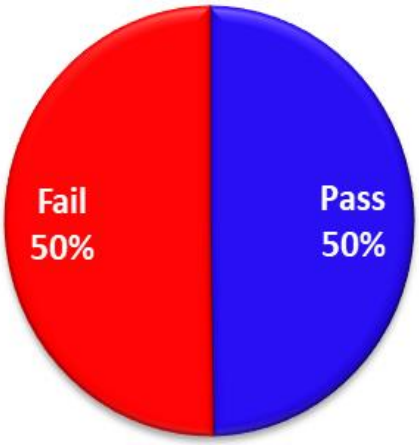
From 2015 to 2019 all the nine courses did not do much to reduce their failures rate, all were still high. Maths 76 to 91 percent, Accounting 52 to 90 percent, history 65 to 81 percent, Chemistry 52 to 77 percent, Geography 55 to 75 percent, Biology 54 to 75 percent, Physics 18 to 58 percent, Economics 31 to 50 percent and English 24 to 48 percent.

Figure 3: Proportion of Students- Fail and Pass in Accounting 2006 to 20019



From 2006 to 2019, 5584 year 13 students sat for the Accounting national examinations and 3131 students failed the 14 examinations while 2353 students passed. The difference of 678 more students failed the course than passed it. Figure 3 shows that 44 percent of students passed and 56 percent failed in the Accounting national examination from 2006 to 2019.

Figure 4: Proportion of Students - Fail and Pass in Economics 2006 to 2019

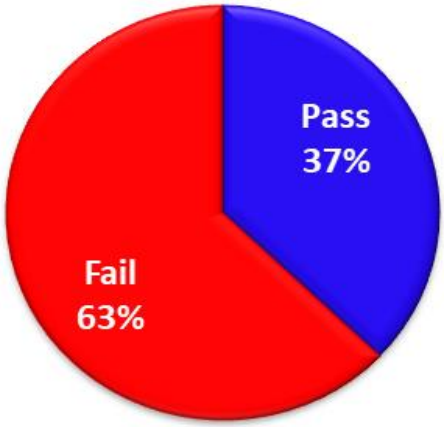


From 2006 to 2019, 6466 year 13 students sat for the Economics national examinations and 3249 students failed the 14 examinations while 3217 students passed the 14 exams. The difference of 32 more students failed the course than passed it. Figure 4 shows that 50 percent of all students passed and 50 percent failed in the Economics national examination from 2006 to 2019.

Figure 5: Proportion of Student - Fail and Pass in History 2006 to 2019

From 2006 to 2019, 5847 year 13 students sat for the History national examinations and 4037 students failed the 14 examinations while 1810 students passed the 14 exams. The difference of 2227 more students failed the course than passed it. Figure 5 illustrates that 31 percent of students passed and 69 percent failed in the History national examination from 2006 to 2019.

Figure 6: Proportion of Students- Fail and Pass in Biology 2006 to 2019



From 2006 to 2019, 5025 year 13 students sat for the biology national examinations and 3159 students failed the 14 examinations while 1866 students passed the 14 exams. The difference of 1293 more students failed the course than passed it. Figure 6 shows that 37 percent of students passed and 63 percent failed in the Biology national examination from 2006 to 2019.

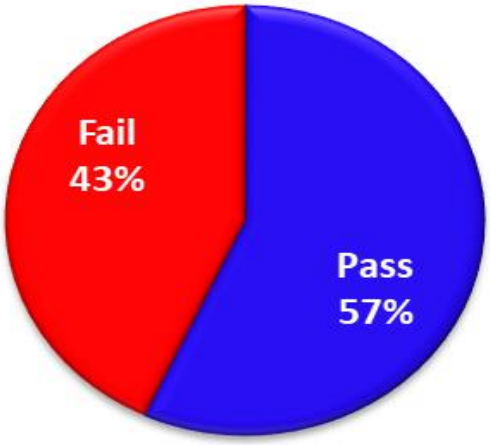
Figure 7: Proportion of Student - Fail and Pass in Chemistry 2006 to 2019

From 2006 to 2019, 3913 year 13 students sat for the Chemistry national examinations and 2272 students failed the 14 examinations while 1641 students passed the 14 exams. The difference of 631 more students failed the course than passed it. Figure 7 shows that 42 percent of students passed and 58 percent failed in the Chemistry national examination from 2006 to 2019.

Figure 8: Proportion of Students - Fail and Pass in English 2006 to 2019

From 2006 to 2019, 23598 year 13 students sat for the English national examinations and 12009 students failed the 13 examinations while 11589 students passed the 13 exams. The difference of 420 more students failed the course than passed it. Figure 8 illustrates that 49 percent of students passed and 51 percent failed in the English national examination from 2006 to 2019.

Figure 9: Proportion of Students - Fail and Pass in Physics 2006 to 2019



From 2006 to 2019, 2509 year 13 students sat for the physics national examinations and 1082 students failed the 14 examinations while 1427 students passed the 14 exams. The difference of 345 more students passed the course than failed it. Physics is the only course more year 13 students passed the national examinations than failed it in the last 14 years. Figure 9 shows the 57 percent of students passed and 43 percent failed in the Physics national examination from 2006 to 2019.

Figure 10: Proportion of Students - Fail and Pass in Mathematics 2006 to 2019

From 2006 to 2019, 16802 year 13 students sat for the Mathematics national examinations and 13116 students failed in the 14 examinations while 3686 students passed the 14 exams. The difference of 9430 more students failed the course than passed it. The figure 10 shows the 22 percent of students passed and 78 percent failed in the maths national examination from 2006 to 2019. The Mathematics is the only course most students failed in year 13 national examinations in the last 14 years than any other course.

Figure 11: Mathematics Students Pass Rate Per Discipline of Arts, Commerce, General and Science

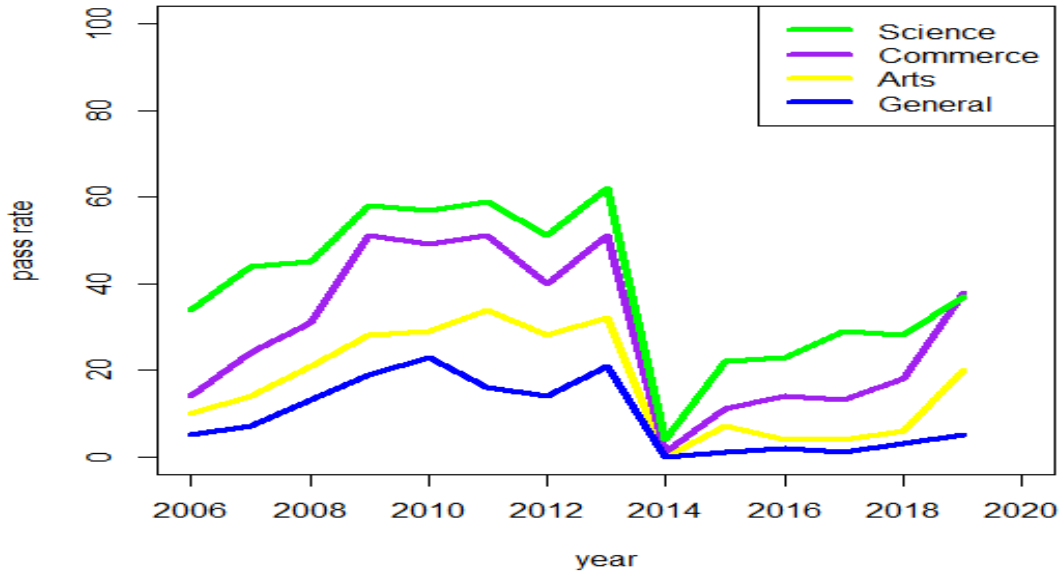


Table 3: Mathematics Students Pass Rate Per Discipline in Percentage

Discipline	PSSC/SSLC Pass Rate in Mathematics per Discipline (%)													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Science	34	44	45	58	57	59	51	62	4	22	23	29	28	37
Commerce	14	24	31	51	49	51	40	51	1	11	14	13	18	38
Arts	10	14	21	28	29	34	28	32	0	7	4	4	6	20
General	5	7	13	19	23	16	14	21	0	1	2	1	3	5

Figure 11 and Table 3 indicates that in 2006, 34 percent of Science students who took Mathematics passed, 14 percent of Commerce students who took Mathematics passed, 10 percent of Arts students, and only 5 percent of General students passed the year 13 national maths examination. In 2007, 44 percent of Science students who took Mathematics passed, 24 percent of Commerce students, 14 percent of Arts students, and only 7 percent of General students who sat the year 13 national maths examination passed. In 2008, 45 percent of Science students passed, 31 percent of Commerce students, 21 percent of Arts students, and 13 percent of students in the General discipline who sat the year math national examination passed. In 2009, 58 percent of Science students who took Mathematics passed the examination, 51 percent of mathematics students in Commerce, 28 percent of mathematics students in Arts discipline, and only 19 percent of mathematics students in the General discipline passed the year 13 national maths examination. In 2010, 57 percent of mathematics students in the Science discipline passed, 49 percent in the Commerce discipline, 29 percent in the Arts discipline, and 23 percent in the General discipline passed the year 13 national maths examination.

In 2011, 59 percent mathematics students in the Science discipline passed, 51 percent in the Commerce discipline, 34 percent in the Arts discipline, and 16 percent in the General discipline passed the

year 13 national maths examination. In 2012, 51 percent of mathematics students in the Science discipline passed, 40 percent in the Commerce discipline, 28 percent in the Arts discipline, and 14 percent in the General discipline passed the year 13 national maths examination. In 2013, 62 percent of mathematics students in the Science discipline passed, 51 percent in the Commerce discipline, 32 percent in the Arts discipline, and 21 percent in the General discipline passed the year 13 national maths examination. In 2014, only 4 percent of Science students who sat the mathematics examination passed, 1 percent of Commerce students who sat the math examination passed, and zero percent in the Arts discipline as well as the General discipline passed the year 13 national maths examination.

In 2015, 22 percent of mathematics students in the Science discipline, 11 percent in the Commerce discipline, 7 percent in the Arts discipline, and 1 percent in the General discipline passed the year 13 national maths examination. In 2016, 23 percent of mathematics students in the Science discipline, 14 percent in the Commerce discipline, 4 percent in the Arts discipline, and 2 percent in the General discipline passed the year 13 national maths examination. In 2017, 29 percent of mathematics students in the Science discipline, 13 percent in the Commerce discipline, 4 percent in the Arts discipline, and only 1 percent in the General discipline passed the year 13 national maths examination. In 2018, 28 percent of mathematics students in the Science discipline, 18 percent in the Commerce discipline, 6 percent in the Arts discipline, and only 3 percent in the General discipline passed the year 13 national maths examination. In 2019, 37 percent of mathematics students in the Science discipline, 38 percent in the Commerce discipline, 20 percent in the Arts discipline, and 5 percent in the General discipline passed the year 13 national maths examination.

Figure 11 shows that from 2009 to 2013 the year 13 mathematics pass rates in all the four disciplines were generally steady. However, in 2014, the pass rates in the four disciplines dropped dramatically to only 5 percent (16 students out of 1369) resulting in the worst pass rate in the year 13 Mathematics examination in the 14 years of this study.

Figure 12: Mathematics Students' failure rate per discipline of Arts, Commerce, General and Science

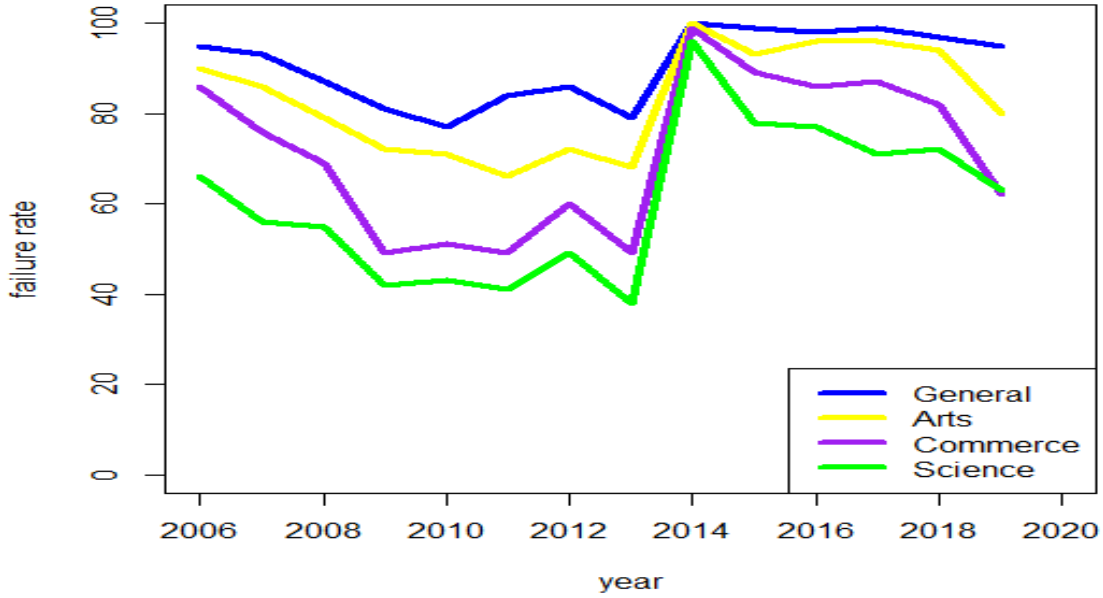


Table 4: Mathematics Students' failure rate per discipline in percentage

Discipline	PSSC/SSLC Failure Rate in Mathematics per Discipline (%)													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
General	95	93	87	81	77	84	86	79	100	99	98	99	97	95
Arts	90	86	79	72	71	66	72	68	100	93	96	96	94	80
Commerce	86	76	69	49	51	49	60	49	99	89	86	87	82	62
Science	66	56	55	42	43	41	49	38	96	78	77	71	72	63

Figure 12 and Table 4 shows that in 2006, 95 percent of mathematics students in the General discipline, 90 percent in the Arts discipline, 86 percent in the Commerce discipline, and 66 percent in the Science discipline failed the year 13 national maths examination. In 2007, 93 percent of mathematics students in the General discipline, 86 percent in the Arts discipline, 76 percent in the Commerce discipline, and 56 percent in the Science discipline failed the year 13 national maths examination. In 2008, 87 percent of mathematics students in the General discipline, 79 percent in the Arts discipline, 69 percent in the Commerce discipline, and 55 percent in the Science discipline failed the year 13 national maths examination. In 2009, 81 percent of mathematics students in the General discipline, 72 percent in the Arts discipline, 49 percent in the Commerce discipline, and 42 percent in the Science discipline failed the year 13 national maths examination.

In 2010, 77 percent of mathematics students in the General discipline, 71 percent in the Arts discipline, 51 percent in the Commerce discipline, and 43 percent in the Science discipline failed the year 13 national maths examination. In 2011, 84 percent of mathematics students in the General discipline, 66 percent in the Arts discipline, 49 percent in the Commerce discipline, and 41 percent in the Science

discipline failed the year 13 national maths examination. In 2012, 86 percent of mathematics students in the General discipline, 72 percent in the Arts discipline, 60 percent in the Commerce discipline, and 49 percent in the Science discipline failed the year 13 national maths examination. In 2013, 79 percent of mathematics students in the General discipline, 68 percent in the Arts discipline, 49 percent in the Commerce discipline, and 38 percent in the Science discipline failed the year 13 national maths examination. In 2014, 100 percent mathematics students in the General discipline, 100 percent in the Arts discipline, 99 percent in the Commerce discipline, and 96 percent in the Science discipline failed the year 13 national maths examination.

In 2015, 99 percent of mathematics students in the General discipline, 93 percent in the Arts discipline, 89 percent in the Commerce discipline, and 78 percent in the Science discipline failed the year 13 national maths examination. In 2016, 98 percent of mathematics students in the General discipline, 96 percent in the Arts discipline, 86 percent in the Commerce discipline, and 77 percent in the Science discipline failed the year 13 national maths examination. In 2017, 99 percent of mathematics students in the General discipline, 96 percent in the Arts discipline, 87 percent in the Commerce discipline, and 71 percent in the Science discipline failed the year 13 national maths examination. In 2018, 97 percent of mathematics students in the General discipline, 94 percent in the Arts discipline, 82 percent in the Commerce discipline, and 72 percent in the Science discipline failed the year 13 national maths examination. In 2019, 95 percent of mathematics students in the General discipline, 80 percent in the Arts discipline, 62 percent in the Commerce discipline, and 63 percent in the Science discipline failed the year 13 national maths examination.

Generally, the mathematics course failure rate is high in all the disciplines in the last 14 years from 2006 to 2019 as shown in the table 4. On average, 83 percent of Arts students who took Mathematics failed, 71 percent of Commerce students, 91 percent of General students and 61 percent of Science students who sat the year 13 Mathematics national examination failed. Overall, the average failure rate in the mathematics examination in the last 14 years is around 78 percent.

Discussion

The failure rate of mathematics from 2006 to 2019 in the year 13 maths national examinations were very high as shown in Figure 2 and Table 2, which ranged from 62 to 99 percent in the last 14 years. Figure 1 and Table 1 explicitly illustrates that year 13 students do not perform well in mathematics national examinations as it shows from 2006 to 2019 where the math ranked the lowest in the graph and table compare to the other eight subjects. The passing rate of mathematics national examinations in the last 14 years ranged from 1 to 39 percent compare to physics with 45 to 82 percent indicates physics has better passing rate than maths. From 2006 to 2019, 16802 year 13 students sat for the mathematics national examinations and 13116 students failed the 14 national examinations while 3686 students passed the 14 exams. The difference of 9430 more students failed the course compare to the passing rate. The mathematics is the only course out of the nine courses where most students failed in year 13 national examinations in the last 14 years. In each year from 2006 to 2019 more numbers of year 13 students failed the maths national examination than passed it. Under the PSSC from 2006 to 2012, of these six years the

total number of 5885 year 13 students failed the mathematics national examinations and under the SSLC from 2013 to 2019, 7231 year 13 students failed the examinations.

In 2014 was the worst result in Samoa educational history for year 13 students in Mathematics, Geography, and Chemistry as most students failed than passed the national examination. From 2015 to 2019 all the nine courses did not do much to reduce their failures rate, all were still high as illustrated in Figure 2 and Table 2 of the research findings. However, maths still top all the subjects with the highest failure rate with 75 to 91 percent, accounting 52 to 90 percent, history 65 to 81 percent, chemistry 52 to 77 percent, geography 55 to 75 percent, biology 54 to 75 percent, physics 18 to 58 percent, economic 31 to 50 percent and English 24 to 48 percent.

In Samoa, the year 12 and year 13 students are studying the entire maths course which is unfair and unjust for the weak students in mathematics. The maths course should be divided into major maths and basic maths. The major maths to have topics like concepts in numbers, algebra, geometry, trigonometry, probability and statistics and calculus, while the basic maths to have decimals, fractions, graphs, integers, and rational fractions, measurements, number series, percent, powers exponents and roots and simple algebra and probability and statistics. The students who are good in maths taking physics, chemistry, commerce, economics and accounting to do major maths, while others who may not be good in maths taking arts courses are to do the basic maths. The SSLC should set two national examination papers for major maths and basic maths papers for year 13 students. In doing so, a clear average rating marks for SSLC mathematics exam will determine the actual performance of students in both the major and basic maths national examinations.

Conclusion

The mathematical assessment has long been plaguing the Samoan year 13 students' performance in the national examinations and will continue, unless the Ministry of Education, Culture and Sports streamlined the mathematics course into major maths and basic maths. Where the year 13 students who are in Science discipline, Arts discipline, Commerce discipline or General discipline could easily make their choice with help of the teacher to study major maths or basic maths. Only then a clear ranking mark in performance will show in the SSLC mathematics national examinations.

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SHORTER COMMUNICATIONS

Emotional Intelligence and Leadership: Interplay of the Variables

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Abstract

This study explores the interplay between emotional intelligence (EI) and leadership and advocates that there's a strong positive relationship amid the variables. Practical implications for leaders are provided.
Keywords: EI, leadership

Introduction

Emotional intelligence (EI) is the ability to perceive accurately, appraise, and express emotion; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer and Salovey, 1997a, b). Salovey and Mayer (1990) categorized EI into five key domains as follows: self-awareness, managing emotions, self-motivation, empathy, and relationships' handling. Goleman (1995) later developed four key dimensions of EI to include knowing and managing emotions of oneself, self- motivation, empathy toward others, and social deftness. Comparatively, leadership can be defined as a process of influencing other people's orientation towards the achievement of goals (Greenberg et al., 2000; Johns and Saks, 2001). The purpose of this study is to establish the relationship between the two variables: EI and leadership.

Literature Review: Correlation between EI and Leadership

Scholars identify that leaders who are able to perceive not only their own emotions but also of their followers are more effective leaders (Barling et al., 2000; George, 2000). Leaders with higher emotional understanding possess the ability to anticipate how others will respond in different situations and are able to strategies likewise (Mayer et al., 2000b). Assessing accurately and perceiving followers' emotions and comprehending reasons of differing emotions in diverse situations by followers is beneficial to the leader in communicating a sense of the organization's vision to followers (George, 2000). George (2000) further stipulates that effective leaders may use their emotions to promote positive emotions among their followers whilst Mayer et al., 2000) states that leaders with an enhanced emotional integration skills are able to use emotions to promote critical thinking, display higher level of empathy and are able to use interpersonal relationships to their advantage. Scholars have generally summed up that leaders with heightened emotional understanding possess the ability to understand followers' emotions and to interact with followers in order to achieve their desired goals (Barling et al., 2000; George, 2000). Effective leaderships is essential in demarcating authentic and unauthentic emotions and expressed emotions vis-a-vis real emotions (George, 2000). Effective leadership requisites higher level of problem solving skills and understanding of human resources and social systems (Marshall-Meis et al., 2000;

Zaccaro et al., 2000). Leadership with higher EI display, impacts self-control and problem solving, leading to greater trust and respect (Barling et al., 2000). Leaders able to manage their emotions possess the ability to adapt their behaviour to match their followers' emotional needs to gain respect of their followers (George, 2000). Scholarships have established a positive relationship between EI and leadership (George, 2000; Kerr et al., 2006; Leban and Zulauf, 2004; Rosete and Ciarrochi, 2005; Sehrawat and Sharma, 2014a, b; Singh, 2007; Wong and Law, 2002). Positive relationship has also been reported in the literature between EI and transformational leadership (Downey et al. 2006; Duckett and MacFarlane, 2003; Gardner and Stough, 2002; Mandell and Pherwani, 2003; Palmer et al., 2001; Sivanathan and Fekken, 2002) and other studies reported no relationship (Brown et al., 2006; Weinberger's (2002). Gill (2002) study deliberates that manager's need planning, organising, and controlling skills while leaders need EI. Goleman et al. (2002) study states that EI is twice as important as IQ and technical skills and as one progresses upwards in their career in an organisation, EI becomes critical.

Methodology

The study utilized exploratory research and depended on scholastic reviews of the literature to explain "correlation amid EI and leadership". Key implications are elucidated in the study from the reviews.

Discussion

It is prudent that leaders have understanding of themselves first and their emotions and how to manage it, before they understand their followers. The context in which emotions co-exist is critical as well. "Emotional intelligence can help leaders solve complex problems, make better decisions, plan how to use their time effectively, adapt their behaviour to the situation, and manage crises" (Yukl, 2010, p. 213). In view of the challenges of the 21st century coupled with new work environment and the impact of the global pandemic, training future leaders is significant to develop EI for effective leadership. This has implications for performance management and training ie: Human resource management. Leaders need to mirror themselves well, which means they need to mirror their behaviours and impact of their behaviour on others. Mirror Leadership ought to be an ever-evolving leadership practice. Leaders cannot expect followers to change if they themselves are not willing to change. It is pertinent for the leader to comprehend their blind spots and display adaptability, self-confidence, innovation, and initiative by serving as change catalysts thereby further displaying true EI. This will affirmatively trickle down to greater employee engagement, commitment, and satisfaction. EI has proven to have a positive impact on leadership. However, more scholarships should examine the relationship between EI and different leadership styles in the university context. Another important aspect is to examine the difference in the practice of EI itself. The rigorous findings would not only be noteworthy for the whole organization and its leadership but also for the employees themselves and would enhance human resource management at the workplace.

Conclusion and Implications

Organisations can become psychic prisons if leaders do not set the right tone of the organization. If they lack emotional intelligence, it could have more far-reaching consequences, resulting in lower employee engagement and a higher turnover rate. Some leaders may shine at their jobs and be highly prolific but without EI they cannot survive the tides of complexity presented by the environment.

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Role of Emotional Intelligence in Conflict Management

Rafia Naz, National University of Samoa

Abstract

This study explores the interplay between emotional intelligence (EI) and conflict management and advocates that there is a strong positive relationship amid the variables. Practical implications for leaders in conflict management are provided.
Keywords: EI, conflict management

Introduction

Emotional intelligence (EI) is the ability to perceive accurately, appraise, and express emotion; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer and Salovey, 1997a, b pp. 3-33). Salovey and Mayer (1990) categorized EI into five key domains as follows: self-awareness, managing emotions, self-motivation, empathy, and relationships' handling. Goleman (1995) later developed four key dimensions of EI to include knowing and managing emotions of oneself, self- motivation, empathy toward others, and social deftness. Comparatively, Conflict is a pervasive phenomenon that pervades a multitude of organizational processes and outcomes. Its omnipresence and the importance of conflict management has been acknowledged in diverse fields including psychology, communication, organizational behaviour, information systems (IS), and marketing (Deutsch, 1990; Greenhalgh, 1987, 229-271; Pondy, 1967; Pruitt and Rubin, 1986; Putnam and Poole, 1987 pp. 549-599; Robey et al., 1989; Thomas, 1976; 1992; Wall and Callister, 1995). The purpose of this study is to establish the relationship between the two variables: EI and conflict management.

Literature Review: Correlation between EI and Conflict Management

Scholars identify that there are numerous conflict management styles at the workplace and the integrating style has been considered a significant style in managing interactions with other individuals in conflict scenarios, enhancing proper resolutions of conflict and producing greater productive results (Gross and Guerrero, 2000). Research also demonstrates that EI plays an important role in resolving conflicts functionally (Jordan and Troth, 2002, 2004). Jordan and Troth (2004) argued that "the ability to be aware of and manage emotions is also thought to facilitate functional than dysfunctional conflict resolution and consequently contribute to better team performance". Emotionally intelligent people have the ability to better manage and regulate their own emotions and the emotions of others (Ng et al., 2007; Mayer et al., 2008). With greater EI, leaders display greater empathy that encourages individuals to consider other interests when they want to solve conflicts. Moreover, this empathy can lead people to be altruistic (Singer and Fehr, 2005; Declerck and Bogaert, 2008), cognizant of the existence of other people' needs (Kamdar et al., 2006) and more skillful in anticipating how other people will behave and act (Singer and Fehr, 2005; Declerck and Bogaert, 2008). With these characteristics, EI leaders may regard other

people's needs and interests in solving conflict. In addition, EI leaders are more likely to select integrating and compromising styles because those styles may have more beneficial outcomes in terms of the efficacy and suitability (Gross and Guerrero, 2000; Sharma and Sehrawat, 2014). Given that integrating and compromising styles have positive effects on conflict resolution (Gross and Guerrero, 2000), these styles are preferably the styles selected by leaders as part of their EI in conflict resolution.

Methodology

The study utilized exploratory research and depended on scholastic reviews of the literature to explain "correlation amid EI and conflict management". Key implications are elucidated in the study from the reviews.

Discussion

Scholarships have suggested that EI may be used by organizations to select effective leaders (George, 2000; Kobe et al., 2001). Other scholar's highpoint that leaders can benefit from providing EI training to leaders (Barling et al., 2000). Mayer et al. (2004) stated that leaders need to cope with the mood of their organizations and that a mysterious blend of psychological abilities known as EI is what leaders need to accomplish that goal. Kellett et al. (2002) report that perceiving other's feelings and empathizing with them may establish an effective bond that is beneficial for leadership. Leaders' use of emotions can enhance cognitive processes and decision making (George, 2000). Rosete and Ciarrochi (2005). The reviews are very helpful for developing assessment and appraisal tools to determine the congruency and association amid the leaders EI and the conflict management strategies in practice in various organisational contexts. This also has implications for EI training to be better able to manage conflicts at the workplace. It is also pertinent to diagnose authentic versus unauthentic emotions at the workplace and the way differing leadership and conflict styles can be integrated in different national and cultural contexts.

Conclusion and Implications

In conclusion, this research advocates for more investigations on the topic in different context, nationalities and cultures. It also stresses on the significance of assessment/appraisals, trainings and evaluation of the importance of EI for individual, team and organisational effectiveness. A multi-tiered approach in investigating leaders, peers and all echelons of staff is essential. EI can also be explored on different work dimensions and OB areas.

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