# Rere Āwhio

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# CONTENTS

# SUSTAINABILITY, COVID-19, AND EMPLOYMENT: THE ONGOING CHALLENGES OF 2022

## Barnaby Pace

It is with great pleasure that I welcome you to Issue Two of Rere Āwhio - The Journal of Applied Research and Practice. This issue offers an excellent selection of collaborative research which has been undertaken between the academic staff and students of Otago Polytechnic Auckland International Campus, as well as articles from another tertiary institute (Article 5) and a government department (Article 11). A testament to the success of Issue One. The research depicted within this issue is reflective of the current global concerns, the ever-present global climate change and the need for sustainable practices, the global impact of COVID-19, and the current New Zealand employment environment.

In December 2021 Otago Polytechnic Auckland International Campus launched its Green Office Toitū programme, to support students and staff to act on sustainable initiatives. The Green Office is an international movement that was started at Masstrict University in 2010 in the Netherlands with the objective of embedding sustainability into the research and education within the university's operations. The Otago Polytechnic Auckland International Campus is the first campus in New Zealand to connect with the movement, demonstrating the innovative practice and future focus of the academic staff and students, which is reflected in this Issue. Balducci & Moa (Article 1) offer insights as to how the Green Office Toitū programme sustainability internships have had a positive impact on graduates of programme, demonstrating their drive and ambitions to become 'sustainability champions' within the wider context of the work environment. Dai et al. (Article 3) examined sustainability through a professional development lens drawing on ideas proposed by the 2020 UN Agenda for Sustainable Development. The objective within the article is to address how the facilitation of a training programme for peer teachers can contribute to sustainable professional development, with the authors producing valuable insights for further application and development. Also, within the sphere of the Green Office's scope of projects under the goal of 'Good Health and Well-Being' is the research undertaken by Silva et al. (Article 7). This research explored the application of a socio-ecological model to improve the health and well-being of office workers. This is an area of growing importance, particularly as the workforce feels the ongoing effects of the COVID-19 pandemic.

The last couple of years have been turbulent, to say the least, and as we move into a post-COVID world we need to reflect on the challenges and opportunities that we faced on a local and global scale spanning education and employment alike. Within the education environment, students and academic staff have experienced a shift from in-class on-campus delivery to online and then back to on-campus life. This has come with its challenges, an issue which is explored by Zhukov et al. (Article 4) identifying positive and negative aspects of such transitions. Psychologically the impact has been significant as the certainty of employment and associated income is still a challenge. For immigrants, such concerns spread to include other factors such as work-based visas. Within this issue, several articles including Patel & Kularatne (Article 8), Kaur et al. (Article 9), and Bhutia & Kulartne (Article 10) explore different aspects of COVID-19 on migrant workers. Wider employment challenges are also covered from the examination of challenges for migrant workers by Perera et al. (Article 2) and to turnover rates in Early Childhood Education by Andres et al. (Article 6) with proactive and practical solutions recommended.

The quality of the research and the collaborative effects between academic staff and students is reflective of the underpinning aim of Rere Āwhio to build communities of practice amongst researchers and students from across New Zealand institutes and with wider global networks. Through innovation and collaboration, we will be able to continue to address the challenges of the 21st century toward a sustainability future.

# SUSTAINABILITY INTERNSHIPS:
# A PATH TO BECOMING AGENTS OF CHANGE?

## Bruno Balducci, Dani Mao

**ABSTRACT**

Otago Polytechnic Auckland International Campus (OPAIC) offers student internships through its Green Office Toitū programme, with the aim of developing sustainability awareness and skills in a non-simulated, experiential context. In order to investigate the impact of sustainability internships, the Employability and the Learning & Teaching teams at OPAIC have been conducting a long term research project on the perceptions, learning progress, skill acquisition and career paths of the student and alumni participants. This article is a case study (based on written qualitative data obtained through the wider research project) designed to focus on two Green Office Toitū participants in greater depth than would be afforded by a more comprehensive survey. By comparing and contrasting their experiences of acting on sustainability, first as Green Office interns, and later as alumni working for different employers in Auckland, this study provides a detailed picture of the way that sustainability internships can affect the attitudes and behaviour of those involved. Their personal reports describe their learning in sustainability and the challenges they were able to meet in order to disseminate information, make suggestions, put forward proposals and introduce measures designed to improve the organisational culture, policies and processes at their place of work. The narrative that emerges from these accounts gives us an insight into the cognitive and affective development which enabled Green Office Toitū interns to bridge the "commitment gap" and become agents of change as alumni.

**Keywords:** sustainability internships, Green Office movement, work-integrated learning.

## LITERATURE REVIEW

From the perspective of work-integrated learning, whatever enables students to change and therefore to learn from their work experience forms a central question in the literature on internships (for example: Ivkovic & McRae, 2021; Shephard et al., 2015; Sulkowski et al.,2020; Zsóka et al., 2013). It is understood in the context of this literature that whilst acquiring knowledge is a necessary part of the process, it is not enough for such a change to occur. Students may gain awareness and even develop relevant expertise without feeling motivated to behave in accordance with the knowledge they have acquired. Their understanding of global issues needs to be affective and not simply cognitive in order for it to become conducive to sustainable action (Hicks, 2002). In other words, students must be emotionally engaged with their learning, both in terms of its content and its processes, if it is to result in behavioural change.

Nor should this change be perceived as being exclusively personal. Lozano (2008) analyses the complexities of promoting sustainability in the world of work at the level of groups and the organisation as a whole (as well as individuals). He identifies three types of attitudes which are manifested in each of these levels: 1) informational, 2) emotional, and 3) behavioural. Informational attitudes are what is known and believed about the topic (i.e. sustainability), emotional attitudes are how people feel about it, and behavioural attitudes are what they are prepared to do (Loranzo, 2008). Sammalisto et al. (2016) summarise the experience of

change as "a congruence between the informational, emotional and behavioral attitudes so that what is learned, what is thought and what is done agree" (p. 3). This complexity has implications in its turn for the way OPAIC view and evaluate learner progress in work-related learning. How individuals act in sustainability has to be seen in the context of existing attitudes within their team and their organisation, not simply in terms of how their actions are connected to their own attitudes.

Furthermore, our ability to understand students' learning will depend on our having evidence that is sufficiently wide-ranging and multi-layered to convey the complexities involved. At the individual level, we would need some kind of data or documentation that reveals the nature and extent of changes that have taken place at the informational, emotional, and behavioural levels. The bulk of this material is likely to be the student's self-perception, in the form of learning journals, written or spoken feedback from students, internship reports, etc. In making use of this material, the key question would then be: "How do the students' self-perceived sustainability knowledge, awareness and actions in the beginning and at the end of their studies differ?" (Sammalisto et al., 2016, p. 4). Here the timeframe could either be narrowed down to before and after their student internship, or extended to include a period of employment after graduation.

Sammalisto et al. (2016) admit there are a number of limitations to their study, including the fact that it may be impossible to tell how much of the changes in students' attitudes are caused by their studies (or work-integrated learning) and how much by other sources of knowledge or development. Students could be influenced by media stories for example, or by friends and activities outside of their education. A further limitation of this particular study is that the results do not show how students would behave in real-life situations. To gauge a student's self-perceived knowledge, awareness and actions once they are in employment requires data that extends beyond the timeframe of their studies (Gaebel et al., 2012).

Such a study of former students' actions as employees would need to do more than simply determine whether "their self-confidence regarding sustainability knowledge has increased" (Sammalisto et al., 2016, p. 13). While data on affective as well as informational development is undoubtedly of value in the context of student learning on sustainability, knowing how these students act later on in their jobs remains essential. How dynamic and proactive were they as independent agents, team players, and members of their organisation? Only their track record in the workplace, first as student interns and then as new recruits, will provide a reliable indication of their progress.

What research on this timescale would provide is some insight into the extent of the commitment to promoting sustainability. In their study on students' perceptions, Emanuel and Adams (2011) found there was a "commitment gap" when it came to recycling. While the vast majority of student participants understood the waste management system put in place on their campus, there was a discrepancy between what they knew they should do and what many of them were actually doing (Emanuel & Adams, 2011). Informational knowledge does not automatically lead to appropriate behaviour. The same applies to student internship programmes as it does to campus recycling schemes. The behavioural attitudes of students in their individual journeys before and after graduation can be set against the sustainability aims of OPAIC courses. According to Zsóka et al. (2013), the impact of environmental education is correlated to the intensity of its programmes of study. On that basis, the more students are involved in sustainability in their internships, the greater will be their commitment to raising awareness and introducing green practices.

## BACKGROUND

OPAIC has a vision of developing New Zealand's most employable graduates, and the internship programme plays an invaluable role in helping students to transition into the workforce. The Covid lockdown and work restrictions in Auckland in 2021 meant that many host organisations began to operate remotely and the OPAIC internship programme needed to be agile in order to deal with the challenges that this situation presented.

OPAIC consulted the intern students, some of whom expressed a desire to have an authentic and formal engagement in sustainability initiatives and contribute to building sustainable local communities as international students. OPAIC then adapted the Green Office model to its campus (Green Office Movement, 2021) and worked with a number of students to join the global movement. Green Office Toitū was set up as the OPAIC campus-wide sustainability hub, offering meaningful professional development learning to intern students in exchange for their work to progress OPAIC's sustainability strategy (Otago Polytechnic Auckland International Campus News, 2021).

Green Office Toitū offers interns the opportunity to operationalise sustainability by organising events, promoting climate action initiatives, sharing carbon footprint tools, and conducting relevant research projects. Meanwhile, students enhance their employability skills, particularly innovation and leadership soft skills (Balducci & Mao, 2022).

Green Office Toitū has four priority Sustainable Development Goals (SDGs) and contributing project targets:

1. Good health and well-being
    – campus recreation and wellness
    – prevent substance abuse
    – access to sexual and reproductive care
    – urban forest and park initiative working group
    – student mental health focus.

2. Responsible consumption and production
    – food and dining sustainability initiatives
    – reduce waste generation on campus and at home
    – FutureFit competition (to promote sustainable lifestyle)
    – Again Again campaign (on reusable packaging)
    – advocate for brands committed to sustainable practice.

3. Climate action
    – native tree reforestation project
    – energy choices: efficiency, renewables, and conservation
    – Auckland conservation volunteering
    – Carbon Footprint Calculator
    – Individual carbon neutrality.

4. Partnerships for these goals with:
    – government agencies
    – communities
    – SMEs
    – researchers
    – other sustainability-passionate organisations.

## METHODOLOGY

The focus of this research was how OPAIC's Green Office Toitū internships affect students' attitudes and behaviour after graduation. More specifically, we wanted to know to what extent the particular type of internship these students undertook resulted in a deeper understanding of sustainability and a stronger personal commitment to promoting more sustainable practices in their subsequent employment. It is important for OPAIC that the internship programme not only helps to build greater knowledge of sustainability in students and alumni, but also fosters their ability to act and influence others in the world of work. In other words, there is a role for higher education providers to play as agents of change (Doring 2022), and students in their turn can adopt such a role when they become alumni in employment.

The questions we sought to address in this article were: How did some of our Green Office students perceive their own knowledge of sustainability before and after their internship? How did they behave in their employment during the first year after graduating from OPAIC and what does this tell us about their learning? For them to be able to act effectively in promoting environmental awareness and sustainable practices in their new jobs, they would need

i)   a clear understanding of their present context,

ii)  a firm grasp of what can be done in practical terms, and

iii) the motivation and capacity to act accordingly within their roles and responsibilities

Acting for better sustainability as an agent of change involves taking initiative in order to disseminate information, make suggestions, put forward proposals, or introduce measures designed to improve organisational culture, policies and processes. To gain insight into what is learned through a sustainability internship that will equip OPAIC alumni with the confidence and skills to exhibit such patterns of behaviour at work, it was decided to look at data covering the whole time span from their student internship to their present occupation (up to one year after graduation). We set out to investigate their attitude to sustainability immediately before they became student interns, how they perceived what they achieved during their student internship and their perspective on what they are doing now for the environment in relation to their work as alumni.

Given the relatively small number (so far) of OPAIC graduates whose internship was directed at sustainability, the pool of potential participants for our study was limited. In these circumstances, such a constraint was also an advantage in that it enabled us to delve more deeply into the specifics of their internship experience and their performance in their current occupation. We could map out the details of a few of our students' journeys, identify key points and issues, and possibly take actions on our Green Office internship programme.

By the same token, we would be preparing the ground for the development of a data-gathering system on internship students and alumni. As pointed out in a TRACKIT report for the European University Association (Gaebel et al., 2012), it is essential to collect data on all aspects of academic programmes: "Regardless of how tracking is approached, institutions need to establish explicit feedback loops, which would ensure systematic use of the results of tracking and their contextualisation" (p. 54). The intention here is to upgrade the current OPAIC system in order to be able to track the professional development of both students and alumni in sustainability skills (as well as their career progression). In addition to providing some hard data, such a system would be able to capture individual voices and provide a rich source of information for further research and associated purposes in employability.

Hence we chose to follow a case study approach, which is recommended for research into work-integrated learning (Fleming & Zegwaard, 2018). According to Lucas et al. (2018 p. 217), "case study as a methodology provides researchers with the ability for a flexible, in-depth and multi-perspective research approach". Yin (2013) defines a descriptive case study as one where the phenomenon being examined is viewed within its context. Experiential learning on sustainability practices in business was the phenomenon to be studied in the context of Green Office Toitū internships, where students are exposed to a higher intensity of environmental education. All the data to emerge from this research was qualitative and perfectly suited for constructing

narratives based on our findings, a form of representation that brings the students' and alumni's voices to the fore and allows their stories to be told (Lucas et al., 2018). It follows that the theoretical foundation for this type of research is broadly constructivist in that knowledge is co-created and personal experience can be conveyed in its subjectivity.

We had three data collection methods at our disposal for this project: student focus groups, coursework samples and post-graduation reports. Applied Management students were invited, soon after completing their internships, to participate in group discussions. These online meetings were recorded, and the transcripts carefully studied for thematic content, following procedures approved by the OPAIC Research and Ethics Committee (Balducci & Mao, 2022). Then six months after their graduation, alumni who had completed a Green Office Toitū internship were contacted and their consent for using their coursework (i.e. their industry projects and post-internship reflections) was obtained in writing, together with a written description of their work experience and progress after graduating, in whatever format they preferred. In the end, we found that two of the participants in our research provided parallel stories whose common ground as well as particulars were the most illuminating. They were also happy to be identified and acknowledged for their achievements.

## FINDINGS

Maimiti works for an IT distributor dealing in Information and Communications Technology hardware, software, Cloud, and Internet of Things (IoT) solutions. Shehan, meanwhile, is employed by a retail business selling luxury designer rugs, cushions, furniture, and other interior accessories. Whereas both of them left OPAIC as highly motivated graduates with a good track record in developing more environment-friendly approaches to business management, neither of their employers was particularly focused on sustainability. But in each case, the story of how these former students took up the challenge of raising awareness and implementing change begins with their personal views and beliefs prior to their internship.

Maimiti started her industry project with a very positive attitude to ecological alternatives, or as she put it, "sustainability has always been important to me". As for Shehan, his perspective was more complicated. He explained that he used to be happy "talking about the subject", but was never "actually concerned about being sustainable and taking initiatives". However, they are equally prepared to acknowledge in their own terms the part that their studies played in enhancing their motivation:

> …*studying at OPAIC raised my interest in sustainability to another level.* (Maimiti)
>
> *My internship with the Green Office Toitū (...) has helped me to understand the true meaning of sustainability.* (Shehan)

Shehan has repeatedly stressed in his focus group, his coursework assignments and his post-graduation report that the internship boosted his confidence and drove the taking on responsibilities aimed at making his workplace more ecologically sustainable. His initial lack of confidence felt like a significant obstacle for him to overcome. Shehan was involved in presenting Green Office Toitū to the Executive Leadership Team as a potential project for OPAIC, which not surprisingly appeared rather daunting at first. He has described how much he learned from all the work he did on presentations throughout his internship, and its usefulness in his present context where he has proposed sustainability initiatives to his team.

Shehan has also explained that he was "not afraid to take on the responsibility of managing the website and social media" for his current employer. In his internship focus group, he described in some detail how he had managed Instagram, Facebook and Twitter pages, posting different content such as photos, videos and newspaper articles, and also using Canva to create posters and information sheets. In his own words, "there are so many ways in which we can promote our content".

The skills and strategies he learned through his Green Office internship could now be put to good use for marketing purposes:

> Initially, I proposed that my employer focus more on sustainability while promoting the products. All of the hand-knotted rugs that the company sells are 100% natural and don't affect the environment badly. Moreover, some of the collections were imported from Belgium and they were produced using 100% renewable energy according to the government policies in Belgium. As soon as the company focused more on advertising the sustainable aspects of products, it helped us to address customers who had not been identified before. Also, I have requested blogs on the website about how these rugs were made using renewable energy and also how eco-friendly all of our items are.

Shehan reported that he put in place these and other practices which could be introduced without any monetary expenditure and would bring financial as well as marketing benefits to the company.

Maimiti's initial actions on sustainability were also closely modelled on her Green Office experience. Since her internship project was about improving the recycling capacity of an organisation, her first initiative was to re-enable the collection of recyclable items at her employer's new office. She found all the planning for this to be relatively easy after the work she had done during her student internship. The knowledge she had gained was likewise instrumental in encouraging new sustainability practices at work as well as in the private sphere:

> I emailed instructions to all our workforce with some links for those willing to learn more about reducing waste at home. Informal discussions with my co-workers allowed me to share my passion for sustainability and raise awareness on that topic. I was able to attract the interest of some of them and share tips and habits to adopt in order to reduce waste in general.

It is interesting that the reflective internship report she submitted during her studies provides evidence of her learning from published literature on this type of activity:

> In fact, a study conducted in 2019 shows that sharing knowledge within organisations enhances the motivation of teams to assimilate and use this knowledge and, ultimately, improves the creativity of the team (Men et al., 2019).

Her passion and commitment did not go unnoticed by her employer. Asked about her career goals at an interview for promotion to a new role within the company, she talked about her ambition to work towards the United Nations' Sustainable Development Goals. "Sustainability Champion" was then added to her job description.

Shehan's role in his organisation has also evolved rapidly as a result of his proactive attitude and his capabilities. He notes that his initiatives have given him a certain authority in the workplace. This has emboldened him to "suggest changes to the store layout and to processes for improving sustainability. The store used to have plastic containers to display some of the stock which was not that good for the environment. I've managed to replace them with jute boxes which are more attractive and eco-friendly". He also turned his attention to receipts and invoices: "The store used to print hard copies of receipts for customers with all the purchases. I've proposed to email the receipts to customers and only print receipts

if customers request them. I've also proposed using a barcode reader for the delivery orders so that we do not need to print invoices for all the parcels." Maimiti has made similar moves to reduce paper consumption in her place of work: "I provide support when possible to allow staff members to work 100% paperless".

What does the future hold for them? They've certainly made substantial progress since their graduation by channelling the drive and knowledge they were able to develop through their internship experience:

> *Luckily, most of the skills that I obtained through the internship I've managed to apply at my workplace. (Shehan)*
>
> *Sustainability is more than ever a significant part of my career and my daily tasks. (Maimiti)*

And they do have plans for continuing their efforts to make the world of work a better place:

> *In the future, I would like to implement multiple sustainable initiatives. (Maimiti)*
>
> *I'm working on promoting more sustainable initiatives within the business which, hopefully, I can take to the next level. (Shehan)*

## CONCLUSION

The detailed feedback we have obtained from our former Green Office students and alumni provides a wealth of information on the progress they have made and the actions they have taken in their jobs after graduating. Through their stories, we have gained an overview of their learning in sustainability, as well as an appreciation of how they were able to meet new challenges with confidence and creativity. Judging by the reports of the two alumni quoted in this article, we can see how the intensity and focus of a sustainability internship may contribute to bridging the "commitment gap" in our future graduates. Looking forward, we now have a model of the qualitative data that could be harvested by staying in close contact with our former students. This form of tracking could be applied more widely as Green Office Toitū continues to grow and our findings are used for a variety of purposes ranging from programme evaluation, to academic research and marketing. What is more, it could pave the way for OPAIC to take a leading role in developing experiential education and work-related learning in sustainability for international students in Aotearoa New Zealand.

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# EMPLOYABILITY CHALLENGES: SRI LANKAN MIGRANT KNOWLEDGE WORKERS IN FINANCE AND BUSINESS MANAGEMENT IN NEW ZEALAND

## Roshini Upunika Perera, Indrapriya Kularatne and Olufemi Omisakin

## ABSTRACT

Employability challenges faced by workers are common in many labour markets and can occur for reasons such as language barriers, immigration regulations, and dis-equilibrium of supply and demand for jobs. This can be a significant challenge for migrant workers who have moved to a foreign country in search of jobs. This research seeks to identify the employability challenges faced by migrant knowledge workers including those who have the required prerequisites for relevant jobs in their respective fields but have difficulty securing jobs. The internal and external challenges faced by employees, the roadblocks set by employers, and other government regulations on migrant workers are key factors needing to be assessed. Also, how language, communication, and country-specific work experience affect employability, and how networking and some other key factors can help overcome the challenges also need to be considered. New Zealand is predominantly a migrant-dependent nation with almost 25% of the population being migrant workers (Stats NZ, 2018a). Around 2% of these are Sri Lankans, and many of them are knowledge workers possessing the required qualifications and experience for employment (Stats NZ, 2018b). Hence the main objectives of this research wee to identify employability challenges faced by Sri Lankan migrant knowledge workers in the fields of finance and business management in New Zealand and determine how these employability challenges can be overcome.

Keywords: employability challenges, migrant knowledge workers, Sri Lankan migrants.

## INTRODUCTION

Migration has occurred since the existence of mankind (Omisakin et al., 2015). It involves departing one place of living in which an individual's or group's 'felt identities' have been crafted and arriving at a new place where these 'felt identities' will be recrafted (Deaux, 2000). There are many reasons for migration. Individual perceptions of the socioeconomic and political environment, either of the origin or destination of migration, influence migration choices and preferences (Kanfer et al., 2001). During the last two decades, New Zealand (NZ) has attracted highly qualified migrants from all parts of the world as it sees immigration as an essential element in the country's economic development. Since 1990, NZ has promoted itself as a destination for students seeking international education (Asia New Zealand Foundation, 2015). It has also become a migrant hot spot due to its social, economic, and political stability (Selby & Winbush, 2015). Migrants comprise 25% of NZ's population and are of Pacific, Asian, Middle Eastern, Latin American, African, and other ethnicities (Stats NZ, 2018a).

The migration of Sri Lankan (SL) knowledge workers is not a new phenomenon (Cassim, 2017). During the colonial period, the British Empire deployed highly skilled SLs such as engineers, surveyors, and doctors for executive-grade positions in other countries (Collyer et al., 2009). Over the years NZ has become a centre of attraction for SL migrants (Cassim, 2017). By December 2018, the number of SL migrants in NZ was

16,830, including 1,161 who arrived in 2016, 1,262 who arrived in 2017, and 1,330 who arrived in 2018 (Stats NZ, 2018b). Stats NZ reported that the majority came under the student visa category, but others migrated under other visa categories such as resident, work, and visitor visas.

In 1991, the NZ government introduced a point rating scheme to encourage skilled migrants from other countries, with emphasis on professional and trade qualifications, and business and work experience (Pernice et al., 2000). A skill-based classification was introduced by the NZ government as the Australian New Zealand Standard Classification of Occupation (ANZSCO) where jobs were classified based on skills defined by the body Australian Bureau of Statistics (ABS), 2021). Prior to the establishment of ANZSCO, the New Zealand Qualifications Authority (NZQA) was established in 1989 to ensure that NZ qualifications were accepted as credible nationally and internationally (New Zealand Qualifications Authority, 2014). Accordingly, engineers, Information Technology (IT) specialists, high-end construction workers, project managers, health professionals, scientists, environmentalists, and builders were able to migrate to NZ as direct/conditional residents, subject to the ANZSCO standards, NZQA endorsement, and achievement of the rating system requirements (Stats NZ, 2018b). However, knowledge workers (KWs) in the business management and finance sectors were not able to follow the same path as ANZSCO did not include their qualifications on the list of direct/conditional skilled migrants. Therefore, this study argues that SL migrant knowledge workers (SLMKW) who were academically/professionally qualified with or without managerial work experience were restricted from migration to NZ as direct/conditional residents. However, they have the option of coming to NZ as tertiary students where they become eligible for a work visa upon successful completion of their education programmes, allowing further time in the country and opening pathways for resident visas (Malcolm Pacific Immigration, 2022). Accordingly, 15% of tertiary students' study comprises management and finance-related studies (Education Counts, 2019).

Migrants face challenges when seeking employment in their host countries irrespective of their educational and professional qualifications, work background, and experience (Udah et al., 2019). Lack of language proficiency (Batalova & Fix, 2010), cultural adaptability (Campion, 2018), lack of local work experience and qualifications, non-recognition of foreign qualifications (Khan-Gökkaya & Moesko, 2021), lack of credential recognition and short-term visas (Alho, 2020) are some of the challenges migrants face in searching for employment in their host countries. A large amount of literature is available on employability challenges faced by Indians (Kaur, 2019; Montayre et al., 2019), Africans (Bartley, 2010; Rosewarne & Shuker, 2010; Tuwe, 2018), Chinese (Gong et al., 2020; Ran & Liu, 2021; Wang & East, 2020;), Asians as a whole (Ho, 2003; Wong, 2015), Fiji Indians (Aporosa, 2012; Pio & Dana, 2014). However, only a minimal amount of literature on the challenges faced by SL migrants in NZ is available. Most of the SL migrant student population comes from a management and finance background with less representation in the creative arts, society and culture, food and hospitality, agriculture, and environment (Education Counts, 2021). There is a gap in the literature about the employability challenges faced by SLMKW in the fields of finance and management. This research sought to reduce the gap by identifying the employability challenges faced by SLMKW in the fields of finance and business management from the migrants' perspectives.

The insights from this research will be useful for SL deciding on NZ as a destination for their studies and work, and migrants in general by identifying effective ways of searching for employment and avoiding challenges. It will also be useful to NZ career support services aiming to improve their services and to policymakers when formulating migrant employment policies.

**The aims of this research are:**

To determine the employability challenges faced by SLMKW in NZ in the fields of finance and business management.

To achieve this aim, the following two research questions have been formulated:

1. What are the major employability challenges faced by SLMKW in the fields of finance and business management in NZ?
2. How can SLMKW in the fields of finance and business management overcome these challenges?

## LITERATURE REVIEW

The International Labour Organisation and International Labour Office (ILO) (2007) defined a migrant as a person who travels from one country to the other and stays there over one year or more. According to researchers, emigration occurs due to demand-pull factors which attract migrants to the new destination, and supply-push factors which drive the decision to migrate from the country (Boneva & Frieze, 2001). Economic factors play a pivotal role in decisions to migrate, as in most cases people emigrate from impoverished to economically advanced countries (Rumbaut, 1994). However, the desire to emigrate is not based only on economic factors (Boneva & Frieze, 2001). Migration is a key component of globalisation that influences the world labour market (Zubiashvili, 2017). Accordingly, migrants are a significant human capital source which is essential to many countries (Schuetze & Antecol, 2006). Developed countries have long histories of migrants and they determine the direction and intensity of the world labour market, including labour requiring high qualifications and labour without this requirement (Zubiashvili, 2017). Migration of SLKW for foreign employment and education has become a key attribute of the socio-economic life of SL (Abrar et al., 2014).

### Knowledge Workers

Drucker (2006) explained a KW as a person who possesses core competencies and intellectual capital gained by extensive learning achieved by significant financial and time resource expenditure. Knowledge workers use their knowledge to create value, and as a result, cultivate opportunities based on their findings and they grasp knowledge and apply it to solve problems (Pepitone, 2009). Knowledge workers are usually defined according to the industry in which they are engaged or by their occupations (Surawski, 2019). However, KWs are a subset of all employees, whose productivity is mainly based on knowledge (Wickramasinghe & Ginzberg, 2001). Knowledge is not only individual personal wisdom but is a valuable element of the intellectual assets of organisations (Gayawali et al., 1997). The specialty of KWs is that they bring knowledge into an organisation, accumulate more knowledge by engaging in workplace training, and expropriate what they have developed when they move out of the organisation (Bogdanowickz & Bailey, 2002).

From a human resource perspective, KWs are workers who are critical to the long-term success of an organisation (Despres & Hiltrop, 1995). They frequently change their jobs and are highly mobile (Yigitcanlar et al., 2007) and they are more responsive to being 'pulled' rather than being 'pushed' (Sutherland & Jordaan, 2004).

### Employability Challenges

Economists predict that the global economy is increasingly dependent on internationally mobile professionals as the shortage of highly skilled labour increases in advanced economies as well as in emerging economies (Chernyak & Chernyak, 2019). NZ is also part of this exchange of knowledge as it encourages migrants to enter the country (New Zealand Immigration, n.d.). However, migrants are not always welcomed or accepted by the host country as there is a perception that migrants will take people's jobs (Omisakin, 2016). Such negative perceptions are unhelpful to migrants in their job searches (Devillanova & Frattini, 2011). The ILO (2007) revealed that more than one in every three qualified migrants is excluded from job selection in several western industrialised countries. In NZ migrants find it difficult to secure suitable employment or any employment (Omisakin, 2016). Thus, there is an influx of skilled migrants who can become underemployed and unemployed (Gentile, 2019).

As a result of globalisation, English became the official communication language of scientific and academic literature (Maydell & Diego-Mendoza, 2014). Additionally, English is the predominant and one of the official languages of NZ (Holmes, 1997). Employers expect job seekers to use language proficiency in everyday dealings (Bloemen, 2012). Migrants who are not native English speakers find this requirement a barrier (Creese, 2010) in securing employment as it becomes a challenge to communicate in a manner that is understood by the prospective employer as well as to understand their pronunciation (Xu, 2020). It was identified the lack of language proficiency in migrants as an employability challenge in other European countries such as the United Kingdom (UK) and the United States of America (USA) (Xu, 2020).

Studies identified several secondary labour market problems associated with the unemployment of professional migrants from developing and non-native English-speaking countries (Birrell & Healy, 2008). Even after validation and accreditation of qualifications and work experience, employers consider such qualifications less desirable than qualifications obtained from developed countries such as the UK (Syed, 2008). As a result, skilled migrants from developing countries face difficulties in securing professional positions (Birrell & Healy, 2008). Accordingly, lack of recognition of foreign experience, qualifications, and credentials and communication barriers are major challenges to migrants searching for employment (McKenna, 2012; Ozkan, 2018).

Another prominent challenge for migrants in securing employment is their visa duration (Berquist & Moore, 2019). Employers provide employment opportunities for people who can be with them for longer time (Hann, 2018). When a migrant holds a temporary visa, employers do not see the employment of a migrant as economical (Pernice et al., 2000). Further, based on government policy changes to the labour market, NZ employers prioritise New Zealanders for job openings (New Zealand Immigration, n.d.). The first preference is given to locals, and only if the employer is unable to find a suitable candidate locally, can a non-New Zealander be hired (NZI, 2021). Time taken to adapt to a new culture and the lack of specific job experience in NZ were further employability challenges (Ozkan, 2018). However, networking with people who could provide employment opportunities could facilitate employment opportunities (Kubo & Saka, 2002).

Literature regarding specifically SL migrants is not included in this review because it is limited and not available. This indicates a gap in the literature regarding SL migrants' employability challenges. This research therefore will endeavour to fill the gap in the literature by identifying the most salient employability challenges faced by SLMKW and identify ways to overcome such challenges. The outcome of this research will be useful for SL migrants and other migrants wishing to make NZ their new home, to employers and government when formulating policies, and to other parties involved in migration-related matters.

## RESEARCH METHODOLOGY

This research adopted the mixed-methods approach combining quantitative and qualitative data collection methods.

### Quantitative Data

Quantitative data collection was carried out by disseminating a web-based questionnaire using the Qualtrics platform. The questionnaire had four sections. The first obtained participants' demographic data. The second included educational and professional work experience and qualifications to ascertain whether the participant was a migrant knowledge worker. The third was on employability search options, and the fourth focused on collecting data relating to the research objectives of identifying employability challenges, by using identified variables to produce statistics on SLMKW' views using Likert scales. The questionnaire was designed using the key factors from existing literature, and data was collected and analysed using factor ratings, a method used in similar studies (Gribble et al., 2015; Nunkoosing, 2005). The identification and selection of participants was based on the researcher's judgement according to the purposive sampling technique (Sharma, 2017). This technique allows observation of specific cultural domains and access to

experts within the chosen field (Emmel, 2013). According to Gill and Bernard (2008), there is no identified limitation for purposive sampling until the required number of responses is gathered. The questionnaire was disseminated to all participants selected who belonged to one group, SLMKW currently living in NZ. Further, the snowball sampling method was used to reach out to the required number of participants, requesting participants of the purposive sample to recommend others (Emerson, 2015).

The participants were reached via various social media platforms such as Facebook, Viber, WhatsApp, LinkedIn, and emails. The questionnaire was open for responses for four weeks, and 118 valid responses were gathered accordingly. The first, second, and third sections of the questionnaire were used to gain demographic data and to identify participants that met the SLMKW criteria. The fourth section consisted of three sets of Likert scale questions. Data was analysed using descriptive statistics such as mean, and standard deviations to assess whether they were statistically significant.

Qualitative Data

Semi-structured individual interviews are a commonly used method for phenomenological studies with small samples (Eatough & Smith, 2017). Qualitative data collection was carried out using semi-structured interviews of approximately 25 minutes duration with 13 SLMKW from the main regions (Auckland, Waikato and Wellington) of NZ. The number of participants from each region was selected by deploying the convenience sampling method considering the SL population density of each region. In a situation where the researcher was unable to obtain contact details of the targeted participants' group due to the unavailability of reliable data, the purposive sampling method was deployed (Grinnell & Unrau, 2005). Accordingly, one-to-one interview discussions took place with the Auckland participants. The remaining participants were phone interviewed due to travelling challenges such as the distance from Auckland to those regions. Each participant was numbered as P1, P2, …, and P13 for easy reference and to ensure anonymity. However, data collection did not commence until ethics approval (Reference AIC 83) was granted by Otago Polytechnic Auckland International Campus Ethics Committee.

Qualitative data was collected by using semi-structured interviews and analysed using the thematic analysis method widely used in qualitative data analytics (Braun & Clarke, 2012). According to Sharma (2018), most qualitative analysis involves themes in some way. Thus, thematic analysis is a tool that underpins different qualitative approaches. Thematic analysis enabled the researcher to discover similar words, from responses from the participants during the interviews, patterns, phrases, and themes through reading and understanding raw data; known as the inductive component (Thomas, 2006). An inductive approach to coding and theme development is common (Braun et al., 2015). Although the subjectivity of the researcher is integral to the process of analysis, and findings should be based on the objectives or research questions. The outcomes should emerge directly from the analysis of the raw data and not from a pre-defined model. Therefore, Braun and Clarke's (2012) six stages of the thematic analysis process were deployed to analyse data: 1). Familiarise self with data, 2) Generate codes, 3). Search for themes, 4). Review themes, 5). Define and name themes, 6). Produce report.

## RESULTS, DATA ANALYSIS AND DISCUSSION

The total number of participants was 118 for the questionnaire and 13 for the semi-structured interviews. Therefore, the total number of participants was 138. Participants who participated in this research migrated to NZ through five different visa categories. The total number of participants are 114 (49 females and 65 males). Nearly half of the participants arrived in the students' visa category as shown in Figure 1. The participants' ages ranged from 20 to 59 years and their gender data is presented in Figure 2.

Figure 1 – Participant SLMKWs as a Percentage of Visa Category
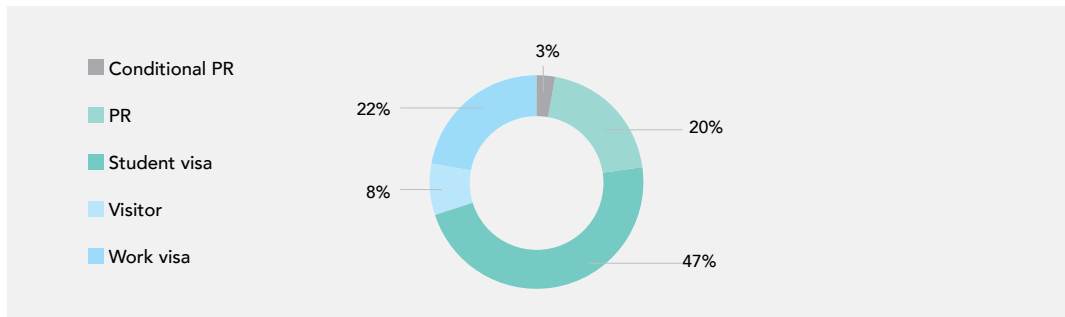


Figure 2 – Age Range and Gender Percentages of SLMKWs - Participants
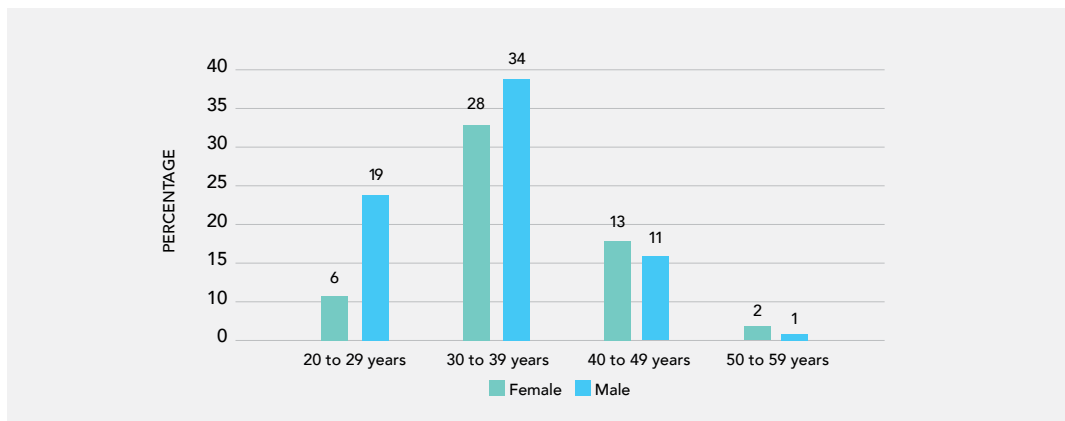


## Quantitative Data Analysis and Discussion

Three Likert scale questionnaires were used to identify employability challenges and how to overcome such challenges. The importance of soft skills was measured under the first construct, and other possible employability challenges were measured in the second construct. The third construct was on knowledge of areas that matter in overcoming employability challenges.

## Importance of soft skills to secure employment

A rating scale (1 to 10 for each soft skill, (1 being the least and 10 being the most important) was developed to obtain responses and mean and standard deviation (SD) was used to analyse the collected data. For analysis purposes, the mean value was defined as least important, somewhat important, important, very important, and extremely important by assigning the mean value ranges as 1 to 2.9, 3.0 to 4.9, 5 to 6.9, 7 to 7.9 and 8 to 10 respectively.

The mean and SD of each soft skill is presented in Table 1. The first six soft skills show the highest mean values in descending order from 8.55 to 8.02, proving that these soft skills are extremely important to analyse the order of preference by participants. However, the SD value of time management and teamwork skills denotes 2.08 and 2.10 respectively, indicating that the responses had a comparatively higher variance. The mean value of presentation and decision-making skills denotes that those skills are considered as very important skills in the job search process, 7.70 and 7.59, respectively.

Table 1 – Mean and SD for the Importance of Soft Skills in the Process of Job Searching

| SOFT SKILL | MEAN | SD |
|---|---|---|
| Communication | 8.55 | 1.61 |
| Interview facing | 8.47 | 1.87 |
| Teamwork | 8.38 | 2.10 |
| English language | 8.33 | 1.78 |
| Computer | 8.06 | 1.79 |
| Time management | 8.02 | 2.08 |
| Presentation | 7.70 | 1.92 |
| Decision-making | 7.59 | 1.72 |

This research suggests that communication, interview facing, English language, and computer skills are extremely important in facing the employability challenges in NZ. Decision-making and presentation soft skills have been identified as very important factors. Similar studies demonstrated the importance of communication which is considered the primary soft skill in gaining employment (Mahmud et al., 2014). The percentage-wise participants' responses are presented in Figure 3. Except for decision-making and computer literacy, all soft skills have been identified as extremely important by most of the participants.

Figure 3 – Participants' Responses for Each Soft Skill as a Percentage (%)
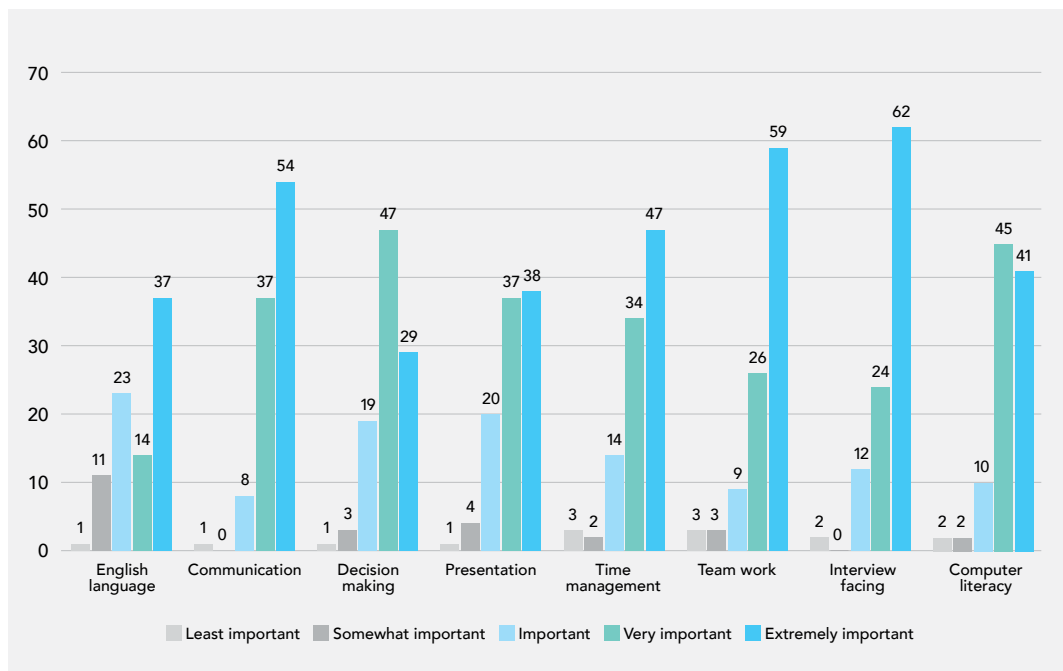
Table 2 – Mean and SD of the Participants' Responses for Identified Possible Employability Challenges.

| EMPLOYABILITY CHALLENGE | MEAN | SD |
|---|---|---|
| NZ work experience | 4.24 | 1.10 |
| Interpersonal skills | 3.86 | 0.95 |
| Lack of self-esteem | 3.81 | 1.04 |
| Lack of personal references | 3.78 | 1.18 |
| Lack of networking | 3.78 | 1.02 |
| Language skills | 3.71 | 1.12 |
| Competition from other migrants | 3.37 | 1.24 |
| Pre-migration professional qualifications | 3.20 | 1.21 |
| Pre-migration work experience | 3.11 | 1.29 |
| Pre-migration educational qualifications | 3.06 | 1.22 |
| Culture | 3.00 | 1.30 |

### Employability challenges

The mean and SD values were derived according to the participants' responses to the attributes shown in Table 2.

For analysis purposes, the mean value was defined as 1; Do not agree, 1.01-2; Somewhat Agree, 2.01– 3; Neutral, 3.01 – 4; Agree 4.01 – 5; Strongly Agree. Not having NZ work experience was considered the major employability challenges because it recorded the highest mean (Mean = 4.24 and SD 1.10). Participants strongly agreed with this. All other ten attributes' mean values ranged from 3 to 3.86, denoting participant agreement with those ten employability challenges. SD values ranged from 0.95 to 1.3. Therefore, there were no significant variances in the participants' responses. Percentage-wise, responses for employment challenges are given in Figure 4.

Figure 4 – Participants' Responses to Employment Challenges as a Percentage (%).
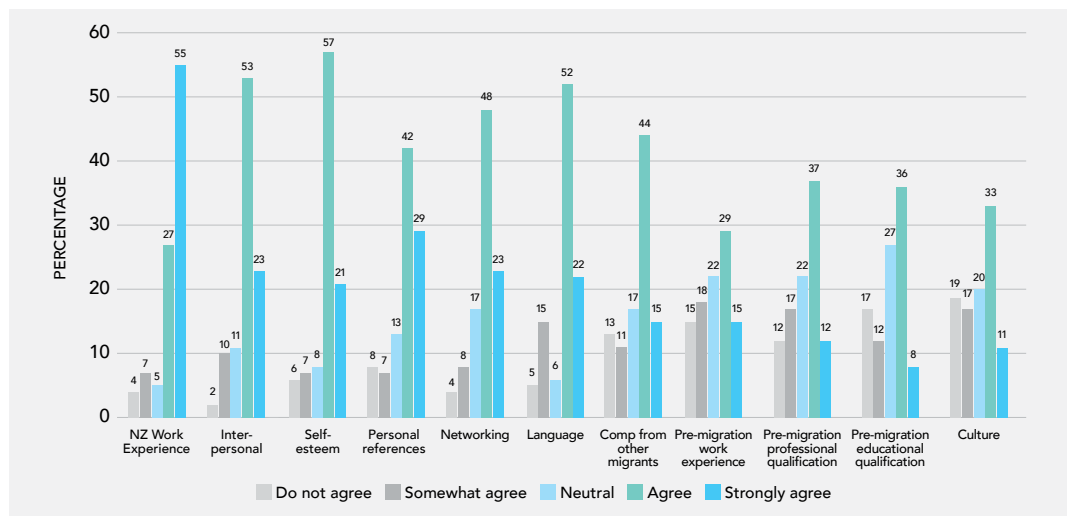
From the above graph, 55% of the participants identified lack of NZ work experience as a major employment challenge in their job searches. However, pre-migration professional and educational qualifications, and culture were not considered by most participants as employability challenges, (12% and 11% respectively). Nonetheless, more than 50% of the participants agreed with the other seven employment challenges.

**How to overcome employability challenges – knowledge in what area matters**

This research identified that knowledge in some areas is important in overcoming employability challenges. Accordingly, the mean and SD of those areas are presented in Table 3.

Table 3 – Mean and SD of the Participants' Responses for 'Knowledge in What Areas Matter to Overcome Employability Challenges'

| EMPLOYABILITY CHALLENGE | MEAN | SD |
|---|---|---|
| An updated CV | 4.44 | 0.70 |
| English language proficiency | 4.30 | 0.73 |
| Visa category | 4.29 | 0.75 |
| Adaptability to the culture | 4.02 | 0.91 |
| Number of personal contacts for reference | 4.01 | 0.95 |
| Self-esteem | 3.96 | 0.84 |
| Knowledge about the job market | 3.95 | 0.96 |
| Employability search sites such as SEEK, INDEED | 3.93 | 0.96 |
| Networking | 3.91 | 1.01 |
| Number of potential employers known and references from them | 3.90 | 0.93 |
| A LinkedIn account to connect with people | 3.72 | 1.10 |
| Getting an additional professional qualification in NZ | 3.60 | 1.11 |
| Engagement with recruitment agents | 3.49 | 0.98 |
| Attending careers fairs | 3.05 | 1.14 |

For analysis purposes, mean value was defined as 1; Not important, 1.01-2; Somewhat important, 2.01-3; Neutral, 3.01-4; Very important and 4.01-5 Extremely important. Accordingly, the first five employability challenges have been considered as extremely important as the mean value was on or above 4.01 (SD was between 0.7 to 0.95 showing a small variance). The remaining employability challenges have been considered as very important factors and showed a variance of 0.84 to 1.11. Percentagewise participants' responses to knowledge in areas of importance to overcome employability challenges are presented in Figure 5.

Figure 5 – Participants' Responses as a Percentage for Knowledge in Areas of Importance to Overcome Employability Challenges.
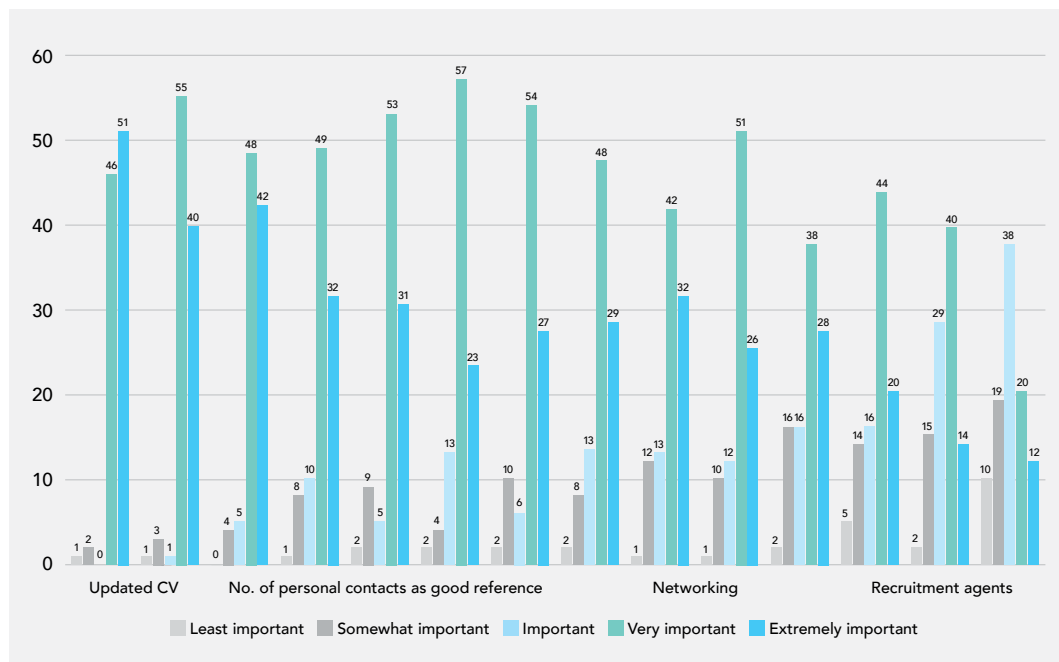


Figure 5 above shows that to overcome employability challenges, an updated CV is extremely important (51%). Except for the engagement with recruitment agents and attending career fairs, the eleven areas were considered as extremely and very important factors by more than 50% of the participants. The majority of the participants' responses were neutral and considered attending career fairs as unimportant as those three categories' response was 67%. However, previous studies demonstrated a direct link between career services, recruitment and related services and thereby networking (Ceperley, 2013).

Qualitative data analysis and discussion

Qualitative data was clustered under five themes (as shown in Table 4) following the thematic data analysis process.

Table 4 – Identified Themes According to Collected Information from Participants

| EMPLOYABILITY CHALLENGE (THEME) | NO OF PARTICIPANTS |
|---|---|
| English proficiency and communication skills | 12 |
| Networking and NZ-based references | 10 |
| NZ-based experience | 9 |
| Recognition of foreign qualifications | 7 |
| Visa status | 9 |

### Theme one: English proficiency and communication skills

Twelve participants mentioned that lack of English language proficiency is a major employability challenge in job searching for most SLs. They all believed that being conversant in English leads to better opportunities. The corporate world considers that ability or inability to speak English is one of the major selection criteria (Stebbins & Shani, 1995). Advanced language skills are a key factor for migrants' ability to obtain the desired job (Abdelkerim & Grace, 2012). Lacking this the research assumes that many job searchers find it difficult to answer to the point during an interview. Similar studies show that inability to refrain from jargon and slang, and accent are significant challenges among migrants' job seekers' inability to pass job interviews (Hebbani & Colic-Peisker, 2012). To improve communication skills a P5 stated, "It is important to be friendly with a few native speakers and other ethnicities and interact with them frequently rather than being with your own community". Accordingly, adjusting to the NZ accent appears to be a major challenge (Li, 2016) which underpins other employability challenges.

### Theme two: Networking and NZ-based references

Networking helps job searchers to identify potential employers and their organisations (Hoye et al., 2009). When such people start noticing the right person, it opens the door for new avenues and opportunities such as job leads, reference letters, job search insights, advice, and so on (Maydell & Diego-Mendoza, 2014). Ten participants (76%) considered networking ability and NZ-based references to be major employability challenges in their job searches. Deliberately or unintentionally, migrants tend to associate only with co-nationals (Brown, 2009) thereby making their own community silos (Maundeni, 2001). Often minorities are stereotyped as outsiders who do not want to engage with the dominant majority (Lee & Rice, 2007). It was found that there are disadvantages to being with one's own community as this disconnects networking with the host country community (Joseph, 2016).

Similar studies demonstrated that migrants have the option of using social media platforms as a way of socialising and communicating with others (Smith, 2012; Venezia, 2012). Social media platforms have become an integral part of social life where most of the society is communicating on several platforms for different purposes (Winstone et al., 2021). For instance, LinkedIn is one such application that brings the corporate world to the fingertips. Having professional networks and references leads to employment opportunities (Abdelkerim & Grace, 2012).

### Theme Three: NZ-based experience

Nine participants (69%) mentioned that employers seek to employ people with NZ-based work experience. Migrants often do not have work experience in the host country until an employer offers them employment (Omisakin, 2016). According to the participants responses received, not having NZ-based experience is a major challenge for first-time job seekers in NZ. NZ-based work experience has not been defined by any employers even though they expect migrants to have it (Lewin et al., 2011). Therefore, no definition is available for migrants to comply with. This phenomenon demonstrates that a lack of NZ-based work experience leads to unemployment or underemployment in NZ (Maydell & Diego-Mendoza, 2014). However, engaging in lesser-skilled jobs such as part-time jobs, internships, or volunteering helps migrants to gain NZ job experience (Kumar, 2014). Having NZ-based work experience in any field makes you employable in NZ (Trlin, 2010).

### Theme four: Recognition of foreign qualifications

Seven participants (54%) stated that their foreign qualifications were not considered in their job search process. P12 stated that "my NZQA accredited for my foreign qualifications were not recognised by any of the employers that interviewed me". P4 stated, "Having a higher educational qualification such as MBA becomes a negative factor when applying for jobs". P5 stated that "NZ employers are looking for people with NZ-based educational qualifications, not foreign qualifications".

Accordingly, employers' lack of appreciation of foreign qualifications is a key challenge for job seekers (Kostenko et al., 2012). Similar studies show that NZQA-accredited qualifications are not recognised by employers (Ressia et al., 2017) which results in brain waste where KWs perform jobs that do not reflect their skills (Pires, 2015). P6 said, "NZ employers do not recognise SL qualifications even though they are on a par with the NZQA system". Therefore, obtaining a NZ qualification in any discipline in management or accounting could add value to a migrant's job search.

### Theme five: Visa status

Nine participants (69%) identified that visa status itself was a major challenge in job searching. Opportunities diminish when the visa is about to expire or will expire in a few months. Therefore, KWs accept unpaid internships or voluntary work where their skills are devalued (Howe et al., 2019). In NZ most of the job advertisements clearly mention that the applicant should be a NZ citizen or permanent resident (Omisakin, 2016). Employers adhere to government policies that clearly state that employers must offer employment to residents before they consider offshore skills (NZI, 2021). Accordingly, migrants face obstacles in their job search due to NZ immigration policies.

### FINDINGS

The five themes based on the qualitative analysis are discussed in the following section.

### Lack of English Language Proficiency and Communication Skills

Based on the analysis, a lack of English proficiency and communication skills is a major challenge to a successful job search. Similar studies demonstrated a high correlation between a lack of language proficiency and poor job outcomes (Aure, 2013; Butcher et al., 2015). Migrants struggle to secure employment due to their lack of language proficiency (Ho, 2015). The results of this research showed that better language skills create better opportunities for securing job in NZ. Similar studies conducted in Australia have shown that success in job searches is heavily reliant on migrants' capacity to represent their character, experience, and accomplishments by using the predominant language of the country (Gribble et al., 2015). However, there are instances where migrants with a good command of English were not considered for employment (Hariswamy, 2019). Apart from communication skills, it was found that possessing soft skills such as presentation interpersonal, decision-making skills and interview-answering skills was essential. Oral communication skills are considered pivotal in a new environment like in NZ. The ability to communicate and present well are two of the most effective career enhancers (Polack-wahl, 2000).

### NZ-based Work Experience

Results analysis shows that lack of NZ-based work experience is a major challenge in a job search for SLMKWs. Even when a migrant has a reasonable number of years of pre-migration work experience, NZ employers look for employees who have NZ-based experience (Trlin, 2010). This phenomenon is also evident in previous studies of the NZ context (Anderson et al., 2014). NZ employers expect work experience in NZ from new migrants, but this criterion was not properly communicated with potential employees or a written criteria in job ads (Lewin et al., 2011). However, the promising side is that employers are not specific about the area of work experience if it is local. Therefore, SLMKWs can perform lower-skilled work and add that work experience to their resumés. Furthermore, NZ promotes voluntary work for the community and environmental projects, and some companies provide paid/unpaid internships (Kumar, 2014). Active participation in such programmes also enables migrants to add NZ-based work experience to their resumés.

### Lack of Recognition of Foreign Qualifications

Many migrants believe that their acquired knowledge and their hard-earned educational qualifications will

be considered by employers. However, migrants are disappointed when they find that employers are keen on recruiting someone with local qualifications. NZ employers do not consider SL qualifications in finance and business management. Similar studies show that employers do not offer employment to migrants based on their home country qualifications (Pernice, 2000). Despite having significant work experience and higher educational qualifications, SLMKWs accept underemployment when they start their careers in NZ. On most occasions, they must compromise on wages as well as employment levels to remain in the workforce. Similar studies prove the same is true for other nations (Ressia et al., 2017; Yao et al., 2015).

## Visa Status

Temporary work visas restrict migrants from exploring labour market opportunities in their fields of interest relative to their qualifications (Anderson et al., 2014). However, for residents and citizens, more job opportunities are available. In NZ, most job advertisements state that candidates must be NZ citizens or permanent residents. New Zealand Immigration expects employers to prioritise recruiting citizens (New Zealand Immigration, n.d). Additionally, employers are unwilling to hire employees on short-term work visas when the visa period is due and if the employer wishes to keep the employee further, employers must liaise with New Zealand Immigration on behalf of the employee over visa requirements (New Zealand Immigration, n.d.). Employers consider it as an additional task for their businesses. Similar studies show that based on their visa status, migrants are treated differently in their host countries (Jackson, 2007). A substantial amount of literature is available regarding migrant policies, and policy-driven factors. However, compared with UK and USA, Australia, Canada, and NZ's immigration policies are strict (Chiou, 2014).

## CONCLUSIONS AND RECOMMENDATIONS

### 1. Conclusions

The first research question was: "What are the major employability challenges faced by SLMKWs in the fields of finance and business management in NZ?" Finding indicated that communicating in English is not easy for SLMKWs, this is supported by similar research demonstrated that migrants' adaptation to a host country's language was a major challenge for migrants seeking jobs (Li, 2016; Lin & Scherz, 2014). Lack of networking skills has been identified as another challenge as the NZ labour market relies on networking; knowing important people formally or informally provides an opportunity that could lead to access to a career path (Maydell & Diego-Mondoza, 2014). However, lack of a connection with New Zealanders, confinement to co-national community silos, and a fear of making mistakes when communicating in English are major challenges to developing networks. New migrants do not have work experience in their host country, yet NZ requires this from its migrants before offering employment (Joseph, 2016; Kaur, 2019). Lack of NZ-based work experience was identified as a key employment challenge for SLMKWs. Regardless of personal factors such as a migrant's education and soft skills, visa status often rules out potential job applicants (Anderson et al., 2014). Employers believe that employees will leave the job in a short time, resulting in an additional recruitment cost to the employer, as well as a disruption to the business. Moreover, employers do not want to incur extra effort with immigration-related documentation on behalf of temporary work visa holders (Hann, 2018). Therefore, employers prefer to recruit residents over short-term visa holders (Hann, 2018), visa status is therefore a major challenge faced by SLMKWs.

The second research question was: "How do SL migrant KWs in the fields of finance and business management overcome these challenges?" The literature indicates that the primary soft skills for gaining employment in NZ are English language proficiency and communication skills (Mahmud et al., 2014). NZ has facilitated toastmasters' clubs in 265 cities for anyone interested in joining, and social events are available for anyone wishing to make friends (Stuff, 2016). Migrants can use such events to enhance their language proficiency and communication skills and make friends with English speakers from NZ (Stuff, 2016). Furthermore, attending such events increases the number of potential contacts and thereby widens the migrants' networks (Stuff, 2016). Since NZ employers prefer to hire people with NZ-based work experience, good enough the experience required by most employed is not specific to particular sector.

Therefore, migrants can look for lower-skilled jobs from any sector to shore up their NZ job-based experience. Participating in paid or unpaid internships or voluntary work will help in the development of migrants' networks, increase contacts, and enable them to gain NZ-based work experience (Gribble et al., 2015). These factors will help to overcome the employability challenges faced by SLMKWs.

One of the most common obstacles for migrants found in this research is their visa status. Regardless of qualifications and soft skills, visa status is often used by employers to exclude applicants from job recruitment, this is supported by several studies that have indicated that temporary work permits restricted migrants from exploring labour market opportunities in their relevant fields (Anderson et al., 2014). This finding is similar to many studies that have shown that migrants receive different treatment in their host countries based on their visa status (Jackson, 2017; Van et al., 2009).

## 2. Recommendations

### 2.1 For SLMKWs

– Enhance communication skills by attending Toastmasters clubs.

– Do not remain in co-national community silos. Try to associate with a NZ family in a homestay to facilitate immersion in NZ culture and language.

– A well-written CV and cover letter are vital.

– Use the free careers services available such as 'work connect' which are established by the government to help migrants prepare for the NZ job market.

– Maintain an active and updated LinkedIn account to enhance the network of connections. Participating in discussions, sharing publications, and obtaining an endorsement.

– Register with recruiters. An active profile with NZ recruitment search sites such as Seek and Indeed is important, as such sites notify job seekers of vacancies.

– Be willing to accept a job requiring a lower level of skill. Additionally, active participation in voluntary work, paid or unpaid internships, or any other part-time job adds NZ-based work experience to their resumé.

– If possible, obtain NZ-based educational qualifications.

### 2.2 For the New Zealand Government

– Develop policies to improve the utilisation of migrant SLMKWs' foreign qualifications in NZ.

– Streamline the current visa process, thereby smoothing the hiring process.

– Reconsider policies regarding the recruitment of SLMKWs in the fields of finance and business management.

– Provide legal advice and establish support services for migrants as a service from the government.

### 2.3 For employers

– Streamline company policies enabling employment opportunities for short-term visa holders and applicants from other countries.

– Shortlist migrant candidates for interviews and consider the possibility of offering employment.

– Provide legal advice and establish support services for migrant workers by facilitating relevant documentation for immigration purposes.

### 2.4 Limitations of this research

The relatively limited sample size may be an issue. In this research, 13 participants' responses (semi-structed interviews) were collected only from the main regions of NZ. The lack of participation from the other regions was due to fewer SL migrants available within the population and difficulties in reaching

them as no contacts were available. Some questionnaire responses were not 100% completed, and the response rate was very low. The sample size was restricted due to time restrictions.

### 2.5 Suggestions for further research

Further study on employability challenges for the entire population of SL migrants in NZ is recommended. The outcome will reveal whether the employability challenges are the same for the entire population of SL migrants in NZ.

Future research could be considered on SL migrants' cultural adaptability in NZ and its impact on securing employment.

Further research could also be carried out regarding employers' perceptions on hiring SL migrants for NZ jobs. Findings from such research could enable SL migrants to understand what is required by them to secure employment in the NZ job market and reduce the impact of employability challenges.

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Article

# TRAINING TEACHERS AS A SELF-EMPOWERMENT APPROACH FOR SUSTAINABLE PROFESSIONAL DEVELOPMENT

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## ABSTRACT

Two key ideas proposed by the 2020 Agenda for Sustainable Development were to "expand the definition of the right to education" and to "value the teaching profession and teacher collaboration" (Zewde et al., 2020, p. 5). In light of these two ideas, teaching practices need to enhance the connectivity and access to knowledge and information and innovatively to engage in various formats of collaboration. Thus, as education professionals, teachers' sustainable professional development is a lifelong, collaborative, action-based, research-based, and reflective learning process enabling continuous teacher empowerment. This research adopted an in-depth case study as the research method to critically evaluate the professional learning from the workshop conducted by the teachers (trainers) from the Construction Department of Otago Polytechnic Auckland International Campus. The workshop was delivered to the construction teachers (trainees) from a counterpart polytechnic in China. Our approach involved critical evaluation of the trainers' professional learning from the initial development, facilitation, and feedback from trainees via participating trainers' deep reflection. Critical evaluation and reflection allowed the researchers (three out of the trainers) to reconstruct the meaning of teacher training as a way of teacher empowerment and formulate an evaluative framework for sustainable professional practice.

Keywords: sustainable professional development, critical reflection, teacher training, learning evaluation, case study

## INTRODUCTION

Sustainable professional development (SPD) is an essential part of the teacher's profession which ultimately determines the education quality and the effectiveness of teaching (Brandisauskiene et al., 2020; Wells, 2014). In the 21st century, teachers must equip themselves with a comprehensive list of competencies on top of their technical knowledge for effective teaching practice. This requirement is influenced by the exponential digitalisation in the world (Cattaneo et al., 2022) and new characteristics developed by the younger generations (Mohr & Mohr, 2017). The Coronavirus Disease (COVID-19) pandemic also accelerated the need for digital teaching skills for the massive transition from face-to-face (FTF) to online teaching mode (Dai et al.,2020; Otago Polytechnic,2020). All these contextual changes necessitated SPD for teachers in a post-COVID-19 era.

Responding to the unprecedented impact of COVID-19 on the educational community the International Commission on the Futures of Education proposed nine sustainable education ideas for concrete actions in its 2020 Agenda for Sustainable Development (Zewde et al., 2020). It was also intended to have these nine ideas  guide teachers in dealing with educational challenges arising from the forever economic, environmental, social, political, and global changes in a post-COVID-19 world (Brandisauskiene et al., 2020; Zewde et al., 2020).

The nine ideas were:

1. Commit to strengthening education as a common good.
2. Expand the definition of the right to education
3. Value the teaching profession and teacher collaboration
4. Promote student, youth, and children's participation and rights
5. Protect the social spaces provided by schools
6. Make free and open-source technologies available to teachers and students
7. Ensure scientific literacy within the curriculum
8. Protect domestic and international financing of public education
9. Advance global solidarity to end current levels of inequality (Zewde et al., 2020, p. 5).

Among the nine ideas, Idea 2 and Idea 3 are the most critical to teachers' sustainable professional development. These two ideas suggest that teaching practice needs to enhance the connectivity and access to knowledge and information and to engage innovatively in various formats of collaboration (Brandisauskiene et al., 2020; Zewde et al., 2020). Sustainable professional development of teachers should be featured by a lifelong, collaborative, and reflective learning process for continuous teacher empowerment (Aldahmash et al., 2017; Alkhawaldeh, 2017; Brandisauskiene et al., 2020; Wells, 2014). In addition, Wells (2014) proposed that research is essential for effective and sustainable professional development, and education professionals should be positioned to be practitioner-researchers.

This research intends to answer the question: "how the facilitation of a training programme for peer teachers can contribute to SPD?" Attempts were made to study teacher training experiences in delivering a two day international workshop as a case to gain a deeper understanding of a new form of teacher empowerment. The elements of SPD were reviewed and used for the evaluation of the training conducted by teachers from the Construction Department at Otago Polytechnic Auckland International Campus (OPAIC). The following section examines the critical elements of evaluating SPD for educational professionals.

## LITERATURE REVIEW

The ultimate goals for SPD are that teachers must be empowered with competencies developed from any type of learning and practice, and such competencies are part of their ongoing professional capitalisation process (Alkhawaldeh, 2017; Hargreaves & Fullan, 2012; Ilgan et al., 2022; Sumaryanta et al., 2019; Wells, 2014). Thus, empowerment and competency development are the key indicators for measuring the outcomes or effectiveness of SPD of a professional development process. Aiming to understanding of outcomes and effectiveness of SPD, a critical literature review was conducted to identify the key criteria/indicators for the construction of an evaluative framework for SPD. In Brandisauskiene et al.'s (2020) study, "long-term, systematic, contextualised, taking place at workplaces, in local learning communities" were suggested as the most influential factors for SPD (2020, p. 155). Wells (2014) similarly recommended inquiry-based, action-oriented, ongoing, and connected learning as the key characteristics of SPD. Furthermore, Ilgan et al. (2022) highlighted that professional development activities should be collegial, reflective, school-based, and long-term. Synthesising the recommendations from prior studies, the essential elements of SPD must include collaboration, real actions, reflections, professional inquiry and research, and continuity (presented in Table 1 below). The remainder of the literature section discusses each criterion, focusing on the importance of teacher empowerment in contemporary educational contexts.

Table 1 – Themes of Sustainable Professional Development

| SPD ELEMENTS | LITERATURE |
| --- | --- |
| Collaborative Learning | Brandisauskiene et al. (2020), Ilgan et al. (2022), Wells (2014), Sumaryanta et al. (2019) |
| Action-oriented Learning | Alkhawaldeh (2017), Brandisauskiene et al. (2020), Ilgan et al. (2022), Wells (2014) |
| Reflective Learning | Aldahmash et al. (2017), Ash & Clayton (2009), Griffiths & Tann (1992), Schön (1994), Moon (2005) |
| Inquiry and Research-based Learning | Brandisauskiene et al. (2020), Kerkham & Hutchison (2004), Wells (2014) |
| Ongoing and Long-term Learning | Alkhawaldeh (2017), Brandisauskiene et al. (2020), Ilgan et al. (2022), Wells (2014) |

Collaborative Learning

Collaborative learning happens when teachers share ideas, participate in study groups, co-teach courses, observe peers' teaching, exchange best practices, mentor new professionals, and many other cooperative opportunities (Brandisauskiene et al., 2020; Wells, 2014). Most prior studies strongly recommended that collaborative learning is the most critical element of sustainable and effective professional development for teachers (Brandisauskiene et al., 2020; Ilgan et al., 2022; Wells, 2014; Sumaryanta et al., 2019). Although teachers formulated their teaching philosophy mostly from their individual teaching experiences and reflective practices (Brandisauskiene et al., 2020), the construct of teaching philosophy will be narrowly scoped without absorptions of the best practice of other educational professionals. The essence of collaborative learning is that teachers can compare and assess their teaching with the others' so that the differences and the related benefits/costs will be apparent enabling them to undertake the necessary self-improvement.

There indeed are many identified benefits of collaborative learning for SPD. However, there would never be any resistance to collaboration. The reasons include fear of being judged, toxically critical culture, barriers to participation, no new learning embedded activities, and disconnectedness from practice (Brandisauskiene et al., 2020; Hargreaves & Fullan, 2012; Ilgan et al., 2022; Wells, 2014). Therefore, it is crucial to cultivate an environment where teachers are comfortable presenting alternative teaching practices to identify new adaptations to their own and others' teaching methodologies (Brandisauskiene et al., 2020).

For fostering a healthy collaborative environment, Wells (2014) promoted the idea of the professional community of learning that formalises informal and powerful learning exchanges between teachers to grow the desire for continuous improvement for contemporary educational needs. It creates a mutual and safe space where teachers can understand, share, collaborate, and support each other (Wells, 2014). Sumaryanta et al. (2019) supported the idea of community-based teacher training and proved that such training was transformational for teacher professionalism in the Indonesia nationwide teacher competency improvement programme.

Action-oriented Learning

Action-oriented learning defines that learning can only be effective when a real action takes place in the workplace (Alkhawaldeh, 2017; Brandisauskiene et al., 2020; Wells, 2014). A real teaching practice must consider specific contextual factors and needs in an educational organisation. Job-embedded or work-

based learning benefits SPD (Wells, 2014) with enhanced motivation and engagement because a close connection between learning and work is created. Action-oriented learning often is iterative and progressive, which ensures learning continuity. Sustainable professional development will be advanced through learning in action as there is no alternative way to simulate the complexity of the issues and problems existing in the educational organisation. Learners and educational organisations would benefit the most from the improved teaching quality achieved by teachers' action learning on-site (Wells, 2014). Therefore, action-oriented learning is a must for SPD.

### Reflective Learning

As an essential part of SPD, teachers should constantly recall, think about and assess their teaching experience in order to develop new knowledge and generate new ideas for better teaching practices (Aldahmash et al., 2017). Critical reflection allows teachers to view and review issues and problems from different perspectives to build holistic understanding (Schön, 1994). It is an attempt to make changes through an attempt to understand it (Schön, 1994). The essential processes for critical reflection include exploration, articulation, and representation of teachers' experiences, ideas, and knowledge, which spiral continuously (Aldahmash et al., 2017; Ash & Clayton, 2009; Moon, 2005; Schön, 1994). To be a reflective teacher, a reflective dialogue between public theories and personal teaching philosophy needs to be established to avoid being low-level operatives and being blind to significant issues of the underlying purpose of education (Griffiths & Tann, 1992).

### Inquiry and Research-based Learning

Wells (2014, p.491) highlighted the emergent idea of "teachers as researchers" for the inclusion of research as one of the critical elements for SPD   Wells (2014, p.491) referred to Kerkham & Hutchison's (2004, p. 88) argument for research as "an approach to professional learning that supports teachers to engage in sustained intellectual inquiry". Kerkham & Hutchison (2004) criticised that discrete, mandated, and one-size-for-all professional development packages disconnect education research from the complex classroom context and misposition teachers as knowledge recipients rather than knowledge creators. They suggested that research-based learning positions teachers at the centre of educational innovation and enables tailored professional learning for individual teacher's needs (Kerkham & Hutchison, 2004). In addition, research facilitates teachers to open a dialogue between theories and practice and strengthen their development of new teaching practices with rigorous data analysis (Wells, 2014). Subsequently, teachers will be empowered with more solid competencies and maintain their SPD better. Wells (2014) analysed the stories and reflections of two representative participating teachers in their three-year research professional learning programme to conclude the programme effectiveness. However, Wells' (2014) mapping exercise against the literature on SPD was more task-ticking than outcome-assessing and the evaluation focused more on the effectiveness of the programme than the learning outcomes achieved by the participating teachers.

### Ongoing and Long-term Learning

Many SPD studies mentioned life-long, ongoing, continuous, or long-term learning as an essential elements of SPD (Brandisauskiene et al., 2020; Ilgan et al., 2022; Sumaryanta et al., 2019; Wells, 2014). Brandisauskiene et al. (2020) commented on the length of time required for SPD is one of the argumentative elements for evaluating the effectiveness of teacher learning. For both educational organisations and professionals, time would be a cost and financially sensitive. Basma & Savage (2018) suggested that short-term, but high-quality, teacher learning is effective. However, the ever-changing world has constant demands for new skills and competencies for teachers (Brandisauskiene et al., 2020). A typical example is the demanding of digital skills for teachers to manage faceless and remote learning environments (Dai et al., 2020). Therefore, the duration and process of teachers' career growth are long-term, continuous, and purposeful for their professional advancement (Brandisauskiene et al., 2020).

Sustainable professional development research is currently an underdeveloped area but has great meaning for teachers, educational organisations, and generations of learners. The extant research on SPD has only narrowly focused on one or a few aspects of educational professional development, and there is no holistic framework for guiding and assessing teachers' professional development activities/practices. Therefore, this research developed a critical evaluative framework for SPD to assess whether professional development activities/practices/programmes can contribute to SPD for teachers.

### Development of the evaluative framework for SPD

The extant literature suggested that collaborative learning, action-based learning, reflective learning, inquiry, and research-based learning, and life-long learning are the five essential elements for SPD (Aldahmash et al., 2017; Alkhawaldeh, 2017; Brandisauskiene et al., 2020; Wells, 2014). These five essential elements of SPD have different purposes for meaningful and sustainable development for teachers. Meanwhile, they are also intertwined to strengthen the effects of SPD. As presented in below, all five elements were constructed for forming an evaluative framework for SPD. Key evaluation criteria were developed under each element for fair and trustworthy judgement of outcomes from a training practice.

Figure 1 – Evaluative Framework for SPD
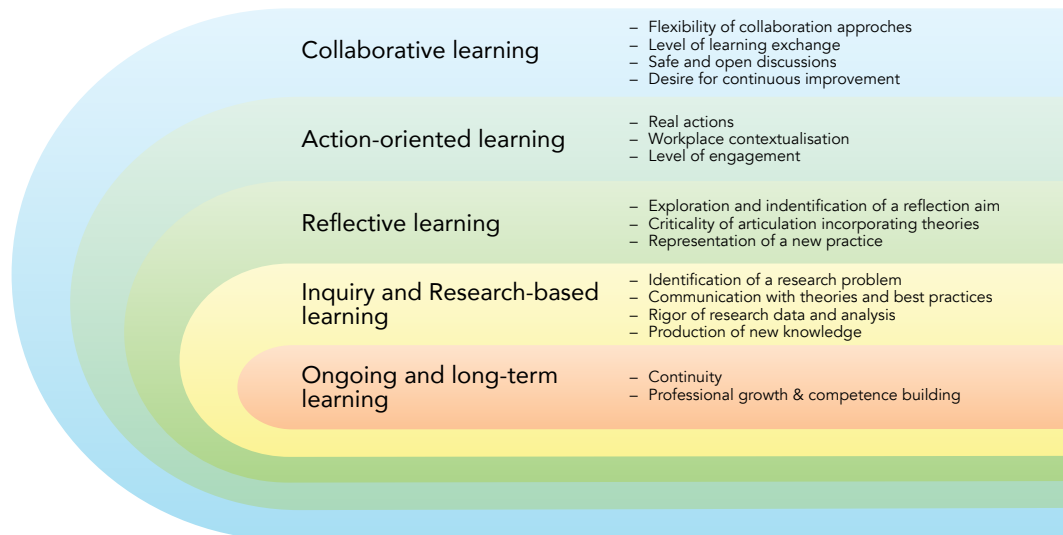


Based on the literature review, the evaluation of collaborative learning is proposed to focus on four different aspects: flexibility of collaboration approaches, level of learning exchange, safe and open discussions, and desire for continuous improvement. Effective collaboration should promote active learning exchanges. To achieve this goal, SPD should allow a variety of approaches for collaboration to ensure attracting teacher engagement (Brandisauskiene et al., 2020; Ilgan et al., 2022; Wells, 2014; Sumaryanta et al., 2019). Integration of formal and scheduled programmes with informal and spontaneous learning opportunities would be sound for boosting dynamic and active learning exchanges. The learning exchanges can happen at a collegial, institutional, national, and/or international level. SPD should provide a friendly, supportive and transparent environment where teachers are willing to engage in open discussions and idea sharing (Brandisauskiene et al., 2020; Hargreaves & Fullan, 2012; Ilgan et al., 2022; Wells, 2014). The conversations or idea exchange should include constructive feedback processes which would stimulate the desire for ongoing improvement.

The assessment of action-oriented learning needs to focus on real actions, workplace contextualisation, and engagement level. Real action is teaching/training/facilitation embedded in a SPD programme as an indispensable part. Criterion contextualisation at the education organisation assesses the extent to which their mission, values, culture, stakeholder needs, and available resources are considered for the action. The assessment of the level of engagement will focus on the participating teachers' motivation, involvement, and contributions (Wells, 2014).

The criteria for evaluating the effectiveness of reflective learning should include exploration and identification of a reflection aim, the criticality of articulation incorporating theories, and the representation of a new practice. An aim for reflection should be originated from teaching experience, which is significant for learners and the other stakeholders. The aim should be reframed to be suitable for initiating the reflective process and leading the dialogue between theories and practices. Criterion criticality of reflection assesses the depth and breadth of varied perspectives that are included in the reflective dialogue or articulation. The representation of a new practice emphasises the outcome of the reflective process, which should be actionable teaching practice with positive changes or improvement (Ash & Clayton, 2009; Moon, 2005; Schön, 1994).

Necessary criteria for assessing inquiry and research-based learning are critical identification of a research problem, the extent to communicate with theories and best practices, the rigour of research data and analysis, and the production of new knowledge/theories/practices. Critical identification of a research problem refers to careful considerations for identifying the problem, including classroom context, teacher factors, and significance to the wider education community. The dialogue between theories and practices needs to be frequent, thorough, and in-depth so that the development of new knowledge will be trustworthy. The data collection and analysis process must be stringent and transparent for further validation. The new knowledge/theories/practices need to address the identified research problem, involve education innovation, and demonstrate a high possibility for future applications (Kerkham & Hutchison, 2004; Wells, 2014).

The measurement criterion for ongoing learning is continuity and professional growth. Continuity refers to whether current learning triggers future learning and one's professional growth. Continuity is connected to reflective learning which teachers need to routinely reflect on their learning and visit additional theories/literature for incremental development of their new ideas of practice (Aldahmash et al., 2017; Moon, 2005; Schön, 1994). There should not be a final ending point for SPD. Professional growth and competency-building are clear evidence for the demonstration of SPD effectiveness. Competencies developed from a professional development programme would scaffold a teacher's career. Hence the evaluation will investigate the process of developing professional competencies (Brandisauskiene et al., 2020).

The application of the evaluative framework for SPD was applied to the case study carried out by this research. The five elements of SPD and the respective criteria were presented in Table 2 for the reflective evaluation of the construction training programme workshop.

## RESEARCH METHODS

A qualitative case study (Yin, 2009) is adopted as the research method. The case study method allows researchers to investigate a research objective such as an individual, an event, or a group of people through rich data and extensive real-life context for generating "many more variables of interest" (Yin, 2009, p. 2). Yin (2009) suggested that case studies are appropriate when research intends to find out "how" and "why", the researcher(s) has(have) limited control over the research objective, and the focus is "a contemporary phenomenon within a real-life context" (Yin, 2009, p. 2). This research meets all the above three criteria as the research question is a "how" question, and there was an intention to research a unique training programme prepared for teachers from a different jurisdiction during COVID-19, and there were many uncertain factors for the success of the training programme.

The case study in this research focuses on a two day training programme workshop, which are part of a teaching training programme for teachers (trainees) from an international vocational institute. The case study is unique as it demonstrates an organisation-wide collaboration in developing and delivering the training programme. It was delivered online to the trainees who live overseas and whose travelling was restricted by the COVID-19 travelling bans. Instead of an evaluation of SPD for the trainees, the focus was the empowerment achieved by the Otago Polytechnic Auckland International Campus (OPAIC) teachers, who prepared and facilitated the training programme workshop for their international counterparts. While the trainees provided their feedback on the training programme (workshop); the feedback was only used for the evaluation of the teachers' professional growth.

The approach in this research involved a holistic evaluative process of learning from the initial development, facilitation, and the trainees' and teachers' feedback on the workshop. The evidence was mapped against the evaluative framework for SPD developed for this research. The Describe, Examine and Articulate Learning (DEAL) model (Ash & Clayton, 2009) used for critical reflection was adopted for avoiding box-ticking exercises. This approach allows the researchers to enhance the richness of information related to the workshop and the teachers' personal growth. The case study was intensive and critical which enabled the identification of the gaps in so that future improvement of SPD can be suggested.

The evaluation and reflection were conducted by two participating teachers and the translator, who were also the researchers. Although the translator was not a teacher they were actively engaged in the initial planning of the workshop and contributed their understanding of the Chinese education context. Three researchers evaluated the workshop separately and then conducted meetings together to discuss each other's opinions before reaching a consensus. This validation process adds trustworthiness to the findings.

Case Context of Teacher Training Workshop

The two-day workshop was organised based on the 'train the teacher' model where the five teachers and one translator all construction teachers from OPAIC. This team of teachers were experts from different areas of construction specialisations. The trainees were lecturers (trainees) from a counterpart polytechnic in China. The main focus of the workshop was to present the context of the New Zealand construction qualification programme and thereby provide insights and training on teaching methods for construction courses.

The counterpart construction polytechnic is a public vocational education institution having 40 years of history in providing a qualified construction workforce for the construction industry in Southern China. It has more than 150,000 graduates and recruits thousands of students per year. The counterpart polytechnic runs cooperative educational programmes with overseas universities from ten different countries and regions, Otago Polytechnic is one of them. The trainees who attended the workshop mostly had foreign education backgrounds. Therefore, some were fluent in English listening and speaking. All of the trainees had construction or engineering qualifications and relevant teaching experience. Their professional experiences range from junior level (i.e., teaching assistant) to senior level (i.e., Associate Professor). However, all trainees had a similar purpose for attending in the workshop, which was an improvement of teaching skills and knowledge of new teaching technology. New Zealand construction law and regulations were another key area of interest from them.

The context of developing and designing the workshop was very specific to the trainees of the counterpart polytechnic which had similar qualifications in construction. Tertiary education in technical courses, like construction, is always found to be challenging to ensure their graduates are ready for the industry. It means are different types of courses that are practical and theoretical for which different teaching methods need to be adopted. Therefore, it was a thoughtful approach to designing and developing a workshop that would ensure the trainees experienced a broad range of teaching techniques. The focus was necessary on specific courses to learn and practice the teaching techniques for the trainees to work with, and training

need to be incorporated in the workshop including some specific designed assessments, class activities, and group tasks.

## Critical Reflection and Discussion

For the purpose of critical reflection the DEAL model (Ash & Clayton, 2009) was used to reflect on range of experiences gained throughout the workshop.

*Describe Learning:*

The conduct of the workshop started with the planning of the schedule for day 1 and day 2. This was the first and most important step to ensure the success of the event. The entire OPAIC team of construction teachers were involved, and regular meetings were held to discuss the structure of the workshop, schedule, duration, and content of the presentation. A common 'Microsoft Team (MS Team)' was created where everyone uploaded their initial ideas and thoughts. These ideas were then taken and discussed during the regular meetings and further improved. It was a team effort to coordinate in-groups based on the subject matter and develop the workshop material. For the appropriate design of the content delivery, it was necessary to identify the trainee's needs. The trainee profile collected through a short survey was used for this purpose. The overall workshop schedules contain different sessions with the OPAIC learning and teaching team and the OPAIC construction team. The topics requested by the trainees were prepared by the collaboration of all OPAIC construction teachers and these were divided into different sessions in the two day workshop; examples from the New Zealand Diploma in Construction programme courses were used as the main content of these sessions.

*Evaluate Learning:*

The evaluative framework for SPD presented in Figure 1 is evaluated in terms of effectiveness and key takeaways are also summarised in Table 2. The team of teachers, teaching and learning experts being from different campuses, the online tools like 'MS teams' were found to be very effective in terms of coordination, sharing, and collaborative learning. Trainees also being online, the digital tools were effective in terms of knowledge sharing and exchange of ideas. All the workshop materials were shared in the file folder set in the MS Team, which again formed the basis for good communication during and after the workshop sessions. It was observed that the level of engagement during the sessions was effective as messages were popping up in the chat box, but there is room for improvement, and it has been identified as the result of effective reflection.

One of the most challenging aspects of the workshop was the language barrier. Having an interpreter who was translating each sentence created an easy flow of communication but resulted in reducing the interactions between the trainers and trainees during the sessions. The learning for improvement identified is to plan for future workshops. For example, it would be better to have pre-recorded sessions of presentations with translation which trainees could review before the interactive workshop session with the teachers. Trainees can pause and absorb the information at their own speed and when they come to a teacher-led session of the workshop, they can participate in active activities and sharing of ideas and add the missing pieces of puzzles in their learning.

In terms of action-oriented learning, the focus was to prepare specific topics requested related to NZ Building Codes and legislation that governs the construction industry, examples of topics value management in construction, and construction project planning. These examples from the current courses in the NZ Diploma in Construction were used and it proved to be very effective as trainees were engaged and they got real examples that were workplace conceptualised. It has been identified that this criterion of the framework can be improved by thinking about how to connect better with both institutes and give opportunities to include more feedback from trainees. It was a great opportunity for teachers to prepare an action-oriented session with a focus on the trainees' needs to be fulfilled and incorporating the technical

aspects. Preparing the content, which is NZ focussed, and trying to present it in a simple way to international trainees was a challenge. The purpose was to share the practices in the simplest way using the topics mentioned above. The content was prepared with powerpoint slides having examples using actual course material from the NZ Diploma in Construction. The learning here is to undertake more targeted activities and take onboard the input from the trainees. There were instances where good engagement like sharing of practices in legislation and codes in the two countries were discussed but more robust activities can be prepared for future workshops.

Having a clear agenda, goals, and plan for the workshop was very effective in terms of delivering an effective workshop and reflection. But it would have been better to provide the reflective journal or some prompt questions to both trainees and the trainers to record their reflections after the workshop. Informal feedback and reflective meetings within teams were effective in getting the points that are also mentioned in this paper, but a more robust component can be incorporated in future workshops. More feedback and better collaboration with learning and teaching teams for developing reflective activities and also incorporating education theories can be planned in future workshops.

Recording the session and looking at these again to learn what went well and where improvements can be made was also very effective; record keeping, getting feedback from trainees, and having a peer discussion session after the workshop could be formally designed to get the maximum benefits. As the trainers, looking into the level of facilitation shift required from teaching the learners in a classroom to conducting a workshop for the trainees also provides comparative learning about how to approach the sessions. Here the trainees come from a strong technical background and their level of understanding and expectations were much higher compared to learners in the classroom. The training activities need to focus on the level of engagement, trainees educational and professional background, and the concept of sharing from both sides for effective sustainable learning to happen.

*Articulate Learning:*

Despite all discussions, regular meetings, and planning for the workshop, there were few things that could be taken as learnings to use as improvements for future workshops. One of the most important things was the language barrier. There was a plan to have a translator and that worked well during the sessions. However, it was a surprise when the introductory session every line of the powerpoint was being translated. This needs to be seriously improved in future planning. The problem identified was the translator would find it difficult to exactly make a direct translation of the words or explain the context. Also, the duration of the presentation was significantly affected and created stress for the teachers and lead to cutting short a few important slides for discussion. As discussed above in the evaluation, the pre-recording and sharing of the presentation materials prior to the workshop would resolve these issues hopefully. The learning for the teachers from the unexpected translation needs of the trainees were dealt with immediately by the teachers and translator. The takeaway for the teachers was quick problem-solving skills and being able to improvise during the execution of the workshop sessions.

Furthermore, action-oriented tasks were effective in terms of identifying the courses and preparing the material very specifically and relevant for providing a range of experience in teaching pedagogy. However, a mix of teaching methods incorporated in the workshop sessions during the presentation and collaborative activities might be more effective. For improvements, the courses from the training institutes could be studied before the workshop and activities could be designed as part of collaborative and experiential learning. This could further provide ways for more interactive sessions.

One of the other aspects for the teachers is to consider inter-cultural competency components in the workshop sessions. To improve the workshop content, thinking about diversity and bridging the cultural gaps, this learning will help to update the workshop plans and facilitate learning sessions with advanced learning and cultural diversity.

Inquiry-based learning and lifelong learning are the two components of SPD which could be reflected as there is a lot of scope for further improvements. Inquiry-based learning has been used with minimum information gathered from the trainees. A series of survey questions were designed for the collection of information about the trainees and their interests, and reflective learning is a way forward to support long-term learning. The gaps identified through this research will be used further to enhance skills and learning for the trainers.

## CONCLUSIONS

Drawing from the critical reflection it can be concluded that the design and facilitation of the workshop for fellow teachers to a great extent empowered them with the acquisition of new competencies and new learning. The five elements of the evaluative framework for SPD were met to a satisfactory extent. Evidence was strongly focused on collaborative, action-based, reflective, and research-based learning. However, life-long learning was slightly restricted by the continuity of the format of the workshop. Strengths of the training programme were effective collaboration among trainers when preparing the training materials and organising the sessions, action-based learning with targeted construction related topics, effective use of digital tools, critical reflection, and identifying the research opportunities. The challenges identified and areas of improvement were to include better use of technology to overcome language barriers, planning the sessions to include pre-recorded videos with translations and only focusing on interactive activities with sufficient time allowed in the main sessions, setting up the reflection journal for teachers to record their experiences in a better way, identifying the research components in training areas and incorporating the new practices. The challenges identified have provided a chance to think about how to work around these in the future. The international-featured workshop needs to be frequent enough for the teachers to exercise their new learning. The polytechnic could invest in resources for providing cross-departmental, cross-campus, cross-institutional, and community-based collaborations for future SPD opportunities.

The limitation of this research is that the findings only apply to the case defined and may not be generalisable for other contextualised SPD activities. However, this research offered insight into a creative approach to educators' SPD. The learnings from this case suggest implications for future SPD practices.

Table 2 – Assessment of construction training programme workshop

| SPD | CRITERIA FOR EVALUATION | EVIDENCE | EVALUATION OF EFFECTIVENESS | FUTURE IMPROVEMENT |
|---|---|---|---|---|
| Collaborative Learning | Flexibility of collaboration approaches | Using online communication tools among teachers and for the workshop provided flexibility in collaboration. Discussions about the collaboration with the Dunedin team including training content, workshop sequence, teachers, and leadership of the entire programme. | Online tools like MS Teams have proved to be very effective in terms of communication, delivery, sharing material, chat, and discussions. The collaboration with the Dunedin team was highly effective as the level of interchange of ideas was high. | Pre-recorded videos and workshop should comprise of activities and discussions only. Use of other digital tools, if possible, to overcome the language barrier. |

| SPD | CRITERIA FOR EVALUATION | EVIDENCE | EVALUATION OF EFFECTIVENESS | FUTURE IMPROVEMENT |
|---|---|---|---|---|
| Collaborative Learning | Level of learning exchange | Material uploaded online, PPT, course material, and also communication during the workshop. | The material was clear, comprehensive, and understandable.<br><br>Although communication needs to be improved there was still participation by trainees in the chats and also verbal comments during workshop sessions. | Creating a mind map of learners' needs would help improve the levels of learning exchange.<br><br>Having pre-recorded videos where they can pause and play and with translation flexibility would improve the level of exchange of learning. |
| | Safe and open discussions | MS Teams chats and also providing opportunities to discuss and comment in different sections of the workshop. | There is room for improvement as discussions were not very productive, due to the language barrier and time constraints. | Pre-recorded transcripts.<br><br>Activities to be prepared so they can be printed in both English and Chinese.<br><br>Plan to improve engagement in safe and open discussions. |
| | Desire for continuous improvement | Changing the mode of the workshop from F2F to online due to travel restrictions shows the eagerness of learners to seek continuous improve-ment, no matter what the circumstances are. Feedback will add to future improvements for both trainees and teachers. | Conducting online workshop overseas shows a desire to share the learning and continuous improvements in the practices. | Challenges faced in conducting online workshop lead to learning about improvements for future.<br><br>Questions about way to improve the level of engagement inspired the teachers to further explore technological options for future workshops. |
| Action-oriented Learning | Real actions | According to the needs of the trainees, having the workshop material already online, a language interpreter, and slow-paced workshop. | Strategies were effective generally but there were time restrictions, and, in some sessions the content was shortened as each line was required to be translated. | Presentations and collaborative activities need to be prepared well before the workshop and shared with trainees. Facilitation could be improved by this. |

| SPD | CRITERIA FOR EVALUATION | EVIDENCE | EVALUATION OF EFFECTIVENESS | FUTURE IMPROVEMENT |
|---|---|---|---|---|
| Action-oriented Learning | Workplace contextualisation | Preparing specific topics requested relating to NZ Building Codes, legislation that governs the construction industry, and including value management in construction, and construction project planning. | The topics were very well presented, and trainees got the material online on MS teams. The engagement in the two day workshop and comments showed the interest of learners. | Connecting to both institutes and identifying opportunities to enable more feedback from trainees. |
| | Level of engagement | To overcome the language barrier an interpreter was there throughout the workshop, engaging through chat and online discussion. | Generally, it was effective but there is room for improvement. | Innovative tools to overcome communication barriers and arrange activities that can spark engagement. |
| Reflective Learning | Exploration and identification of a reflection aim | The aims of the workshop were clearly defined and communicated which provided an opportunity at the end to reflect on the effectiveness. | Having a clear agenda, goals, and plan for the workshop was very effective in terms of delivering effective workshop and reflection. | Communication prior to the workshop, having a reflective journal. |
| | Criticality of articulation incorporating theories | As a bridge-builder, the focus is on designing the workshop to create a bridge between trainers' and trainees' cultural and social gaps. Theories like situated learning, instruction design, and cooperative learning were used to design the workshop materials. | Effective but there is room for improvement | Educational theories and trends can be incorporated better by using more trainee-focussed activities. |
| | Representation of a new practice | This was the first time OP conducted an online training programme. Despite challenges, workshop material met the needs of the trainees. This new approach opens doors for using innovative digital tools and collaborating for training purposes without the need to travelling. | Effectiveness in the sense that it is great learning by using digital tools for conducting such a workshop. | As mentioned earlier, the use of innovative tools can help achieve excellent results. |

| SPD | CRITERIA FOR EVALUATION | EVIDENCE | EVALUATION OF EFFECTIVENESS | FUTURE IMPROVEMENT |
|---|---|---|---|---|
| Inquiry and research-based learning | Identification of a research problem | Collaboration overseas with issues such as language barriers, time constraints, and communication gaps. Effectiveness of exchange of learning in the very technical construction sector. | Effective as it opens the area to research in learning and teaching space. | Research components should be included from the beginning. |
| | Communication with theories and best practices | Experiential learning, authentic assessments, the DEAL critical reflection model, SPD. | The DEAL critical reflection model and SPD were effectively communicated. However, experiential learning was restrictedly exercised due to the language barriers. | The embeddedness of experiential learning into the workshop design could be improved by a thoughtful research plan and effective translation technology. |
| | Rigour of research data and analysis | Teacher reflections, teacher opinions, and training feedback | Teacher reflections were communicated between the three researchers to reach a consensus. Other facilitating teachers' views were also consulted with informally, for strengthening the researchers' understanding.

Trainees' feedback was collected by the standardised Otago Polytechnic learner survey. Although only one-third of the trainees responded with limited comments, their responses offered useful information for the teachers to reflect on. | A proper ethical application and research design would make the research purposes and teachers' SPD goals clearer so that the teacher's self-empowerment process would be more effective and sustainable. |
| | Production of new knowledge | Innovative ideas and tools to conduct an online workshop with teachers from different countries having different cultural and work environments. Also thinking of ways to improve the hurdles due to the language barrier. | Very effective as it opens new opportunities for learning. | Use of innovative tools, getting feedback, and closing the loop in terms of knowledge generated. |

| SPD | CRITERIA FOR EVALUATION | EVIDENCE | EVALUATION OF EFFECTIVENESS | FUTURE IMPROVEMENT |
|---|---|---|---|---|
| Ongoing and long-term learning | Continuity | Feedback from trainees and teachers. | Reflection on the workshop be held using the recordings of the workshop | Reflection in this paper and identifying the point for improvements for future workshops. |
| | Professional growth & competence building | Workshop recordings | Clear demonstrations of online training skills and the ability to improvise when unexpected trainee needs occur | On-going process. |

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# THE DREAD OF NORMALITY: STUDENT PERCEPTIONS IN TRANSITIONING BETWEEN ONLINE AND ON-CAMPUS LEARNING

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## ABSTRACT

The COVID-19 pandemic created a continual fluctuation in day-to-day operations. In August 2021 Aotearoa went into a chapter in its pandemic history comprised of a series of lengthy lockdowns, vaccination campaigns, spread of COVID-19 in the community, and a move from the "Four-level" lockdown system to a "Traffic-light" system. It was also the longest period of continuous online classes for a number of institutions traditionally oriented to face-to-face delivery, including the Otago Polytechnic Auckland International Campus (OPAIC). In April 2022, however, students and staff returned back to the offices and classes. This period was associated with a number of anxieties, hopes, expectations and worries, and it is important to understand some of the biggest challenges for both staff and students to prepare transition plans for any potential future lockdowns or shifts between online and offline classes. The article presents data collected through a series of surveys and focus groups on campus at OPAIC exploring the biggest challenges and perceived risks identified by the learners. The data was collected during the beginning of face-to-face classes after a long period of online sessions as well as a few weeks into a new study block with mostly face-to-face contact. The analysis discusses existing and potential approaches to managing the challenges. The purpose of the project is to capture and explore this unique transition in the history of the campus to better inform future approaches to delivery models and pastoral care.

## INTRODUCTION AND BACKGROUND

COVID-19 was detected in Wuhan, China in December 2019 (Chen et al., 2020) and was already spreading worldwide by January 2020 (Pullano et al., 2020). It has had major effects across multiple industries, social and political life, and the livelihoods of virtually every person around the world. Educational institutions were at the forefront of transformations caused by the pandemic (Assaf, 2021; Farnell et al., 2021) and educational institutions in New Zealand were no exception (Dai et al., 2020; Marinoni et al., 2020; OECD, 2022; Schleicher, 2020). Schools and tertiary institutions in Aotearoa were closed for a considerable amount of time as the government developed and implemented the action plans to control the spread of the virus. At the beginning of the pandemic, the New Zealand Government announced a four-level alert system and implemented it in March 2020. Each level included various measures ranging from closing of the international borders to a national lockdown (Bandyopadhyay & Meltzer, 2020). As COVID-19 community spread increased and fell, the alert levels were raised or lowered in every region. Auckland experienced more days under Alert Level 3 and 4 than any other region in the country which meant that the education institutions were either completely shut down or had to move their teaching online (Beard, 2020; Smart, 2021; Thornton, 2021; Yates et al., 2021).

Aotearoa returned to Alert Level 3 on 27 April 2020 and some restrictions were lifted. Nevertheless New Zealand was experiencing some of the strictest lockdowns worldwide in the effort to eliminate the coronavirus (Baker et al., 2020; Bandyopadhyay & Meltzer, 2020). This required an organisational and

andragogical response from the Otago Polytechnic Auckland International Campus. Prior to the lockdowns OPAIC courses were developed using resources and activities for face-to-face delivery, which included experiential activities during the in-class sessions and self-directed hours, as well as face-to-face examinations. Some courses were developed around event management or internships (which had to either be cancelled or shifted online). Since Tertiary Educational Institutions (TEOs) including OPAIC responded to the lockdowns by immediately cancelling their face-to-face classes, the old approaches were often impossible to implement. The lecturers took this opportunity to quickly develop the resources and activities for synchronous and asynchronous online learning (Dai et al., 2020; Zhukov & Brendenkamp, 2021; Zhukov & Staples, 2020).

## TRANSITIONING BACK TO CAMPUS AT OPAIC

The four level alert system was replaced by the COVID-19 protection framework (traffic light system) in December 2021 (Ministry of Health, 2022). Restrictions like social distancing and limits on the number of people in in-door spaces persisted for a few months but were eventually lifted on March 25, 2022 (Ministry of Health, 2022). After over 7 months of continuous online studies the learners at OPAIC could finally return to campus in April 2022. This move coincided with a number of external events contributing to the stressfulness of the situation. The rise in the number of cases in New Zealand, border restrictions, a growing number of COVID-19 related deaths, international news and many other factors contributed to the anxiety for the learners to come back to the campus.

According to a recent study, the uncertainty (which was one of the defining features of the pandemic) could potentially trigger mental health concerns, such as anxiety and depression (Cameron et al., 2022; Dar et al., 2017; Smart, 2021). The coronavirus pandemic led to multiple lockdowns in New Zealand and the most recent lockdown lasted seven months. The resulting social isolation and loneliness have been linked to mental health concerns (Holt-Lunstad et al., 2015). The current evidence and the previous literature related to the pandemic suggest that mental health issues may manifest only after the peak of the pandemic (Raony et al., 2020; Ren & Guo, 2020). The risk factors affecting the anxiety may include the death or illness of the loved ones, misinformation, loss of peer support due to closures of schools or workplaces, prolonged isolation or being in direct contact with active cases and facing economic burdens (Das, 2020). All of these factors have been prevalent for the learners at OPAIC as students had been subject to all these factors at some point at the time of returning back to campus.

Re-entry syndrome is a well-documented psychological phenomenon that describes the difficulties people face while entering the normal situation after experiencing a long period of absence (Capurso et al., 2020; Cost et al., 2022; Gkatsa, 2021; Mansfield et al., 2021; Schwartz et al., 2021; Weisbrot & Ryst, 2020). Research conducted by Officer et al. (2022) and Poulton et al (2020) mapped the effects of the pandemic on the mental health of various demographic groups based on the mental health recovery plan and recovery framework in Aotearoa New Zealand. Another study by Every-Palmer et al. (2020) on the psychological distress, anxiety and wellbeing in New Zealand due to lockdowns found that younger adults (47.3% of 18-24 years age group) were the most affected. The learners at OPAIC largely fit into some of the most at-risk groups and had been physically separated from their friends, family, and peers for a long time during the lockdown and forced to learn and communicate through screens, while facing the threat of catching and spreading the virus. Psychologists and author Nigel Latta stated that human brains were focused on threats and trying to avoid any situation which could result in psychological, physical or emotional harm, and this made anxiety during major lifechanging events a natural response (ANZ, 2022). The anxieties many people felt as their lives were adjusting to the new normal were understandable and realistic (Hansen, 2022).

The research on the impacts of the coronavirus pandemic on higher education internationally and the impacts on mental health in particular, has been fairly abundant (Cameron et al., 2022; Cao et al., 2020; Elmer et al., 2020; Gonzalez-Ramirez et al., 2021; Marinoni et al., 2020; Paredes et al., 2021; Perz et al., 2022; Poulton et al., 2020; Sundarasen et al., 2020). However, it is important to remember that the phenomenon

of the global pandemic and its consequences is still ongoing, and every study adds to the detail and understanding of a very complex situation that may yet have consequences far beyond what we envision today. This research paper seeks to contribute the OPAIC students' perspective on the transition back to campus and to help adjust our current and future educational products to better fit the needs of the learners in shifting to a genuine student-centric model of education. The research explores the issues, anxiety, fear, and challenges that the students encountered and suggests practical steps for improving the experience of the students both on and off campus. The purpose of this article is thus to contribute to our understanding of the transitioning challenges specific to the OPAIC campus and to add the inputs of our students to the collective understanding of post-pandemic tertiary education.

## METHODOLOGY

Data collection for this study was done through a survey three weeks into on-campus studies and a series of interviews at the end of the first term back on campus in week nine. The purpose of the questionnaire was to understand perceived difference in the experience of the students studying on campus and online. The total number of unique responses was 27 (n=27). The respondents were asked to provide feedback on the elements of on-campus and online studies that they thought were useful and helpful and disruptive and unhelpful. The feedback was summarised through thematic analysis.

The second set of data came from interviews with eight students – two students from each department on the campus. It was important that these students had to have experienced both online and offline studies at OPAIC. All departments had students who fit the criteria, except the English department. We were therefore able to interview students from Construction, Applied Management, and IT departments.

None of the three researchers associated with the project were directly involved with the interview process. This was to keep the study as objective as possible and provide no means for the researchers to influence the students' answers. The interviews were instead conducted by members of the Student Success and Learning and Teaching teams. All students were asked the same six open-ended questions. They were asked about their biggest challenges in studying online and on-campus, followed by their preference between the two study options. The respondents were asked to elaborate what the most important aspects of their studies were and what changes they would like to see made to their studies. The last question asked what additional services they would like to have available on-campus and/or online. The transcripts were then analysed using the thematic analysis method. The expectation was to see what changes in perceptions may have occurred between the beginning of the term and the end of the term and also to obtain more detailed data on some of the themes identified in the survey.

## SURVEY

The survey collected 27 unique responses across the departments of Applied Management, Construction, and IT. The majority of respondents were enrolled in a postgraduate Applied Management course (n=20; 74%). It is also important to acknowledge that the majority of the students started their studies in 2021 (n=22; 81.48%). Only two respondents started in 2022. This meant that at the time of the survey the majority of the respondents had been through at least one lockdown, specifically the lockdown that was happening in Auckland in 2021 from August to approximately November. Since the organisation made a decision to complete the rest of the year online, and the preferred delivery method for term one 2022 was also online, the students had ample experience with online studies, but, probably, very little experience with studies on campus.

When asked about the levels of comfort online and on-campus students had approximately the same attitude towards these two settings. 21 students (77.8%) thought that study on campus was comfortable, and 22 students (81.5%) felt that studying online was also comfortable. The result was identical for the question about effectiveness of study on-campus and online. Although the difference between positive and negative attitudes was marginal, it is important to note that for the levels of comfort, students had

much stronger positivity about the levels of comfort of studying online, whereas the negative responses for the relative levels of comfort for study on-campus were noticeably higher than for online studies. While the general attitudes seem to be relatively similar for the question of effectiveness of online and on-campus studies, students definitely felt much more strongly that studying on-campus was effective. This generally supports the hypothesis that students consider studies on campus more effective, but less comfortable than studying online.

It did not come as a surprise that students generally felt that they could organise their time much better when studying online. In fact, this question had one of the more dramatic positive responses for online studies with a total of 41% strongly agreeing that online studies help them organise their time much better. At the same time, nobody felt that they were particularly disadvantaged by online studies in relation to organising their time effectively. Another result was that students on average thought that they could learn well on-campus and 81.5% cases, whereas only 67% thought that they learnt well during online studies. There were also more respondents who agreed or strongly agreed with the argument for on-campus studies (68%) than for online studies (55%). As for enjoying online and on-campus studies, a larger proportion of people (81.5%) enjoyed their studies on campus and only 70% of respondents enjoyed their online studies.

Overall, the results were consistent with the hypothesis that students generally found studying online more comfortable, more effective, and well suited to organising their personal time, but they also thought that the learning that they had on-campus was more effective and that they enjoyed studying on-campus more than online.

Themes (n=27):

1. *Time and cost management:* This is the most common theme that came up. The main components of the theme include general time saving where there are no specific aspects of studies identified as timesavers. There is also a significant focus on commute as the key factor for time efficiency. Since it was largely embedded in the argument about time and convenience, it is not identified as a separate theme. An important element was flexibility and ability of the students to choose the time when they engage with their studies. Another important component of this theme was the cost of commuting to the city. Whether the students drove or used public transport, the costs of commuting were higher than staying at home and taking the classes online.

2. *Learner performance:* This theme refers to the ability of respondents to concentrate and work on educational tasks effectively. The respondents would talk about potential benefits to their performance and refer to peace and quiet required for them to concentrate and conduct research or writing tasks. When educational performance was mentioned in relation to face-to-face classes, the respondents mentioned relatively higher engagement with courses. While some of the students found it more efficient to study at their own pace and be able to focus on research at home, others found it difficult to engage with materials online, difficult to focus on studies when they were in an informal environment and having very little interest in the subjects that were being studied.

3. *Health concerns:* During the time of the pandemic it was natural to expect people to be somewhat anxious about their health. One of the significant upsides of having non-contact hours in their programme is supposed to be the ability of people to isolate and avoid large groups of people and enclosed spaces. Commute as a risk factor also plays into this discussion of healthcare risks. One respondent was so adamant about the need to minimise health risks that they mentioned it across the board and in all positive and negative factors for online and face-to-face classes. The idea was that there was no number of potential benefits that could outweigh the singular risk of suffering negative health outcomes.

4. *Workspace and resources/recordings*: Many courses rely on research and use of computers, but not all courses have computer labs allocated to them. One of the elements was the ability to use personal desktops or have set ups convenient for students at home, rather than using phones and tablets or

computer labs for students who did not bring their laptops with them. Another significant factor were the recordings of the lectures as there was no consistent culture of recording face-to-face lectures.

5.  *Communication and anxiety*: For some of the respondents a significant factor was the possibility that online classes allowed for them not to engage in any direct communications with their classmates or their lecturers. Texting made communications easier, especially for students who were not very confident of their speaking abilities or did not have the confidence. A few comments went as far as mentioning anxiety about having to talk to people in person. Having computer facilitated classes and higher reliance on written communications rather than direct face-to-face communication in class allowed the students time to process the information at their own pace and, potentially, to work with unknown vocabulary through translation software as required.

6.  *Socialising/networking:* As would be expected socialising and networking became a major theme mentioned in the survey. For most students the ability to socialise was perceived as an integral part of tertiary education and campus life and they found benefits in talking to their classmates and engaging with classmates and extracurricular activities. Even exchanges with others in relation to the courses were seen as significantly beneficial for understanding the materials. Isolation, on the other hand, resulted in negatively reported mental health states and difficulties with engagement in educational activities. This overlapped with the theme of communication anxiety, but highlighted the importance of peer support in tertiary education.

7.  *Responsiveness/tasks:* The theme that came up several times was the responsiveness of lecturers. The comments were mostly about communication, the presence or lack of technical difficulties, possibilities to engage with the lecturers, varying response times, and possibilities for discussions. There were comments about lecturers not being available for comments or to answer questions during online studies because the students did not have direct access to them and could not talk to them while in class or during office hours. There was also a comment that some of the tasks were not designed for online studies and were difficult to perform, since they were intended for face-to-face classes.

Table 1 – The themes are collated from four survey questions which asked for positive and negative feedback on online and face-to-face classes.

| CONNOTATION | | | THEMES (N=27) | | | |
|---|---|---|---|---|---|---|
| Online | Positive | Time and cost management (21) | Learner performance (4) | Health concerns (4) | Workspace & resources/ recordings (5) | Communication and anxiety (2) |
| | Negative | Socialising/ networking (11) | Learner performance (9) | Responsiveness/ tasks (4) | | |
| Face-to-face | Positive | Socialising/ networking (15) | Responsiveness/ tasks (8) | | | |
| | Negative | Time and cost management (17) | Learner performance (1) | Health concerns (7) | Workspace & resources/ recordings (1) | Communication and anxiety (1) |

The themes were mentioned in answers to one or multiple questions to denote either positive or negative connotations through which the theme was mentioned. While there were 27 respondents filling out the comment section, some of them did not provide any information that could be either attributed to one of

the categories or recorded separately as a new theme. Some comments contained information related to several themes.

## INTERVIEWS

The students who took part in the study all had interesting and diverse backgrounds. Both of our Construction participants were more senior students who had studied at OPAIC for at least 4 study blocks before agreeing to the interview. One of them only experienced a single day on campus before he had to switch to online studies for 3 study blocks. He therefore had a very limited on-campus study experience before sharing his insights in the interview. Our two IT students also had at least 4 blocks of study experience at OPAIC, with one having a similar experience to that of the Construction student described. One was a more senior student and the other in his early 20s. Applied Management, unlike IT and Construction, was split between undergraduate and postgraduate students. This was because it was the only department which offered both under- and postgraduate study opportunities at OPAIC. All four students were in their 20s and had experienced online studies for a large part of their degree. The main themes identified in the interviews included health and wellbeing concerns, learner performance and other aspects of academic achievement, and comfort, including concerns over language challenges.

### Health and Wellbeing

The interviews took place near the end of the first study block back on campus which could partly explain lower reported anxiety in the interviewees around the return to on-campus studies. A second likely reason was the sampling method which allowed the students to volunteer for the interviews. It is likely that the participants had lower initial anxiety levels to begin with. One of the respondents mentioned personal worries around catching COVID-19 when returning to campus studies and referred to a scenario where all students and the attending lecturer contracted COVID-19 during one of the classes.

In most cases students started sharing everything they appreciated and missed about on-campus studies. Most of them mentioned increased social interactions as well as how much more convenient it was to get support and make use of campus services. One student mentioned that face-to-face studies improved their ability to concentrate. They said, "if I don't have in-person interaction I find it a lot harder to concentrate on the lesson and get distracted easily". Another student had a different perspective. They stated that some students are introverted and might feel ashamed or embarrassed about not contributing or answering questions in front of other students. At the same time an IT student mentioned that they felt alone while studying online. This feeling of being alone came across as a theme throughout the interviews.

Most of the students highlighted the friendliness of staff and students and said that they enjoyed the atmosphere on campus. One of the IT students mentioned that they enjoyed the hands-on experience that they received in classes and that they always looked forward to the industry guest speakers who were invited to their class from time-to-time.

### Academic Performance

The lack of interactivity was a major theme in most of the interviews. Students mentioned that lecturers didn't always answer their questions during online classes. One Construction student said, "When asking questions, I have to wait a long time to get feedback". They found it hard to get proper support from lecturers in online classes. One of the postgraduate Applied Management students mentioned that they found it a lot harder to concentrate on lessons and were easily distracted due to the lack of interactivity, which ultimately affected their academic performance.

Undergraduate Applied Management students highlighted time management as a challenge due to distractions at home. In line with other interviewees, they mentioned a lack of interaction in the class. They added that many students didn't have their cameras on and had Internet connectivity issues during class.

These challenges, from their perspective, were not conducive to an interactive learning environment.

The Construction students had different opinions on their online study experience. One student mentioned that some subjects were a lot easier to do online, while there were other subjects that proved more challenging. The respondent also mentioned that some lecturers were much better at conducting online classes than others. The lecturers who struggled would simply read from the presentation slides and not open up the topic for discussion or bring in any form of interactivity.

Construction students mentioned that having access to class recordings was the only positive aspect of studying online. This seemed to be the case for many of the interviewed students who indicated that recordings helped them deal with language challenges. A Construction student identified challenges with using the required software while studying online.

For the IT students one of the biggest reported challenges was teamwork. They said that being able to brainstorm and collaborate effectively was very difficult online. This was reported by both IT respondents and didn't seem to depend on any age or experience related factors.

Comfort and Language Challenges

The respondents saw more benefits for them to study on campus than to continue online studies, which was a departure from the results of the survey. Once again, a contributing factor could have been the interviewee sample, although some of the previous concerns about shifting back to campus were consistent with the surveys. In most cases students highlighted inconveniences of discomfort associated with time management and commuting like having to wake up early to be in class on-time. Students with self-reported language challenges said that face-to-face study was faster paced and required much faster reaction times which reduced their ability to understand and engage in class activities. Online studies had recordings and they had an option to go back to and make sure they properly understood the lesson.

A comment from the Construction students mentioned that it would be great if the benefits of class recordings could be kept in a face-to-face learning environment. Another student with reported language challenges said that they enjoyed going back on campus mostly because the social interactions helped them improve their language skills.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the experience of the lecturers and formal and informal feedback, the transition back to campus was a very well received event. Despite the logistical challenges, despite individual staff and students struggling with anxiety, despite the affection that we have for our desks at home and the proximity of domestic comforts, the shift back to campus was a very welcome development for the majority of people. Lecturers can judge for themselves what may or may not be their preferred working style, but it is important to understand how the students lived through these transitions. It is likely that Covid lockdowns may not be the last lockdowns that we see in the near future as we consistently notice warnings of the increased possibility of transition of zoonotic diseases to human populations. This is due to encroachment of anthropic activities into natural habitats, climate change, changes in water levels, increasing disruptions in access to clean drinking water, and other major disruptions to livelihoods and ecological systems that are happening today (Rockström et al., 2009; Steffen et al., 2015). This means that we have to be prepared for future lockdowns and for future transitions between to online and campus life. We can also use our recent transition as a learning opportunity to extract some of the better features of online studies and transpose them over interactive classes on campus.

The first change that most lecturers can make would be recording their campus classes. There are challenges to making such recordings at the moment, and these challenges are mostly technical. Online classes put us in front of the computer with the microphone always being close, which allowed the recordings to have a

consistent level of quality. All participants had similar setups and thus responses from students were being processed on MS Teams, which made recording the sessions technologically simple. To make a similar level of recordings in class, each classroom needs to have appropriate equipment which includes one or many dedicated microphones that can consistently record the sound in the room while filtering noise pollution. It would also need a high-quality camera that can capture the elements of the class activities that are important for the recordings. This requires some significant investment and, potentially, upgrading the computer systems on campus. This may be costly and difficult to implement in the immediate future but could be added to the list of strategic goals for the organisation, especially as an element that seems to be adding significant value for students with English as a second language. At the current point in time, the lecturers can still record the classes using existing computer infrastructure in the classes. While it may not have the same level of quality, it will still be a useful resource for students.

While the responses from students mostly focused on recordings, it is, probably valuable to make sure that the notes and exercises conducted in class on, for example, the whiteboard, could be captured online. There are multiple ways to do that. It's possible to continue using the digital whiteboards on MS Teams when in class or take pictures of notes on the board and on flip charts and poste them online. There are, of course, other ways to do this. Consistent recording of audio-visual and written materials discussed in class is likely to contribute to better outcomes for students who genuinely want to engage with the classes and dedicate time to self-directed studies. It is also likely to take some pressure off the students and reduce their anxiety in case they fall sick, because they would be safe in the knowledge that there are options to catch up with the materials that they may otherwise have missed. The design of materials for weekly activities and tasks seems to be a contributing factor to the success and satisfaction of students for both online and on-campus courses. Detailed written instructions seem to be a good addition to the recordings and could both help the students in class and assist those who may have missed some of the classes for any number of reasons.

The recent transition also highlighted the importance of support services for the students and the need to help them manage anxiety. Many mental health issues which could have been dealt with personally by the students became exacerbated during the lockdowns and required a concentrated and targeted set of support measures, Future planning in this regard could build on a holistic view of students which does not reduce them to their academic life but recognises that other spheres of their lives are likely to significantly influence their academic performance. This reinforces the importance of such broadly discussed concepts as Fink's taxonomy (Fink, 2013) and multiple other examples of andragogical and heutagogical approaches to student management. It also highlights the need for lecturers to be dual professionals, equally expert in their field of knowledge and in the field of education. But it also highlights the need for responsive and agile student support services which must be equipped to deal with mental health issues. It may even be worthwhile to model some of the practices employed in certain corporate settings, where staff have access to health and well-being workshops, exercises, and activities throughout the year. The form which this may take is not as important as the opportunity to engage with others who may be in a similar position as oneself. A good example from ANZ was a series of workshops provided by a professional psychologist to the employees in order to address some of the anxieties that they may have had in returning back to the office space (ANZ, 2022).

The survey shows that some of the students may be wary of communicating with people face-to-face regardless of the situation with lockdowns, and so it may be a good idea to introduce electronic counselling sessions or to partner with a service provider or a group of counsellors with expertise in provision of online counselling. For an organisation like OPAIC, one of the options could be to take advantage of other parts of the organisation. Future Skills – a partner in the OPAIC institution -- has a campus that prepares, among other qualifications, counsellors, and this seems like a perfect match for a situation where we may be dealing with multiple cases of minor or major mental health challenges. While mental health support must always be provided by fully trained professionals, some of the capabilities of the people going through counselling education may be used to review and identify some of the risks.

It seems that social interactions and networking were some of the major positive factors that overshadowed every other negative or positive feature of campus learning, and thus, providing multiple and varied opportunities for social interactions, various social events, student driven activities, and networking sessions would be highly beneficial for academic achievement, development of language skills, and general mental health and well-being. And, most importantly, it is critical to remember that the educational process should be agile and adaptable to the realities of the world around us. There may be a need for further risk analysis and planning for other unexpected events that may otherwise disrupt the traditional flow of what we see as on-campus or online education. This is a long-term and ongoing ambition which must be kept in focus as we develop our future educational products and support systems. It is now important to work on how we can better engage students in a co-creation of support mechanisms for online and face-to-face classes, for the development of content, and for general improvement of the educational experience and outcomes.

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# ESG AND CORPORATE FINANCIAL PERFORMANCE- EVIDENCE FROM NEW ZEALAND

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## ABSTRACT

The research paper reports the impact of New Zealand companies' environmental, social, and governance disclosures on their financial performance and market value. Further, the research examined how financial slack (FS) moderates the relationship between environmental, social, and governance scores (ESGS) and company financial performance. The sample consisted of quarterly data from New Zealand-listed companies from 2010 to 2021. Univariate and multivariate methods were used to test the hypotheses and assess the objectives. The results indicate that the relationship between environmental, social, and disclosures (ESGD) and the market value of companies is positive and significant. However, there exists a negative relationship between ESGD and financial performance. After adding Financial slack(FS) as a moderating variable, the ESGS and financial performance relationship became significant. This suggests when companies have surplus funds, they invest in environmental, social, and governance-related activities which enhances both their financial performance and reputation. The research is helpful to academics, companies, and policymakers interested in understanding the impact of sustainable practices on companies. Furthermore, the findings provide insight into initiatives that regulatory authorities might take to improve environmental, social, and governance disclosures and reporting among New Zealand companies for long-term value creation.

**Keywords:** Environmental, social and governance (ESG), performance, market value, sustainability.

## 1. INTRODUCTION

Over the past few years, environmental, social, and governance (ESG) information has become an important indicator of a company's capability to promote sustainable growth. The United Nations Environment Partnership Financial Initiative (UNEP FI) has been advocating for the incorporation of ESG factors into company decision-making practices since 1992(UNEP FI 1992). As a result, ESGS has become integral for developing sustainable strategies that affect financial performance in companies (Eccles & Serafeim 2013). Furthermore, ESG integration has become a key issue among investors, governments, regulators, companies, and non-governmental organisations (Lee et al., 2016). According to Bassen and Kovacs (2008), ESGS are critical in providing ESG information that investors use in evaluating a company's risks and opportunities. Han et al.,2016b) reported that environmental activity, social responsibility, and governance had a significant effect on a company's ESGS. Additionally, it has been argued that sustainable development encompasses more than just corporate social responsibility (CSR), and non-financial information is critical for company managers to meet their environmental goals (Hank et al., 2013).

New Zealand is one of the countries that are most concerned with issues related to company governance, social equality, and the environment and several initiatives have been launched by the government in New Zealand to develop ESG practices (MBIE, 2021). The New Zealand Stock Exchange (NZX) published a guidance note on ESG reporting in 2017 as part of its updating of the corporate governance code which includes the voluntary disclosure of ESG information by New Zealand companies (NZX Corporate

Governance Code,2020). A Klynveld Peat Marwick Goerdeler (KPMG,2020) report shows that 47% of New Zealand organisations documented sustainability performance in their annual reports. Moreover, 74% of New Zealand companies reported on ESG matters in 2020, up from 69% in 2017 (KPMG, 2020). Additionally, the number of organisations acknowledging climate risks in their financial or annual reports has increased by 13% from 2017 to 2020 (KPMG, 2020). However, there was significant variation in the standard and type of information voluntarily reported as there are varying frameworks and standards for sustainability reporting and a national framework has not yet been established for ESG reporting (KPMG, 2020). This practice causes inconsistency across reports, and it can be difficult, or even impossible, to compare reports of various companies. Nonetheless, the New Zealand government is taking proactive measures to increase the uptake of consistent and comparable sustainability reporting and making it mandatory(MBIE, 2021).

It is not surprising there is a growing body of literature that has examined the impact of ESGS on a company's financial performance (Friede et al., 2015; Lo & Sheu 2007; McWilliams & Siegel 2000; Ortas et al., 2015; Waddock & Graves. 1997). However, there have been different views on the relationship between ESG disclosures (ESGD) and financial performance. Some researchers argue that ESG, which has been regarded as an important part of the strategy of a company, has negative effects on company financial performance (Aboud & Diab, 2018; Aouadi & Marsat, 2018; El Ghoul et al., 2017; Fatemi et al., 2018; Nekhili et al., 2020). On the contrary, other researchers suggest that investing in ESG activities leads to improved financial performance (Cahan et al., 2015; Eccles et al., 2014; Fatemi et al., 2015) and suggest a positive relationship between ESG and financial performance in the long term.

Given these inconclusive results, there is a need to replicate these studies and examine the impact of ESGS on companies' financial performance in New Zealand. Hence the research aims to investigate the impact of ESGS on market valuations and the financial performance of New Zealand companies.

More specifically, the research addresses three research questions.

(1) What is the impact of ESGS on the financial performance of New Zealand companies?

(2) What is the impact of the ESGS on the market value of New Zealand companies?

(3) Does FS moderate the relationship between ESGS and Return on Equity (ROE), Return on Assets (ROA) and Tobin Q.

The research contributes to the literature in three significant ways:

(1) It provides a broader perspective by examining both resource-based views and stakeholders' theories to understand how ESGS influences company financial performance and market valuation.

(2) The findings of the research have practical implications for academics, investors, and policymakers to enable them to understand the significance of incorporating ESGS into financial performance reporting.

(3) It also reflects upon the need to have a proper framework of ESG reporting standards in New Zealand for improved disclosures and accountability by companies.

## 2. LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

### 2.1 Relationship between ESG and Company Financial Performance

Environmental, social and governance disclosures have been studied extensively , however, many studies have found inconclusive results about the relationship between ESGS and financial performance. (Eccles et al., 2014; Orlitzky, 2001).

The traditional neoclassical theory holds that investing in ESG activities increases financial costs for a company (Derwall et al., 2005; Hassel et al., 2005; Palmer et al., 1995; Semenova & Hassel 2008) and ESG practices negatively impact financial performance (Garay & Font, 2017; Revelli & Viviani, 2013). Cassar

&Friedman (2009) suggests that a company's sole purpose is to increase shareholders' wealth and any purpose that deviates from that will reduce the effectiveness of the company. Yoon et al. (2018) documented that ESGD increases companies' costs and decreases the value of the environmentally sensitive company, thus leading to a financial disadvantage. Some other researchers have also reported negative associations between ESGD and financial performance (Branco & Rodrigues 2008; Brammer et al, 2006; Lee et al., 2009). Researchers Lee et al. (2009) noted that ESG investments worsen financial performance and suggest that this might indicate that companies with high ESGS will have lower equity costs. Galani, et al. (2012 report that profitability is not significantly related to ESGD. This is supported by an additional group of authors who conclude that there is no connection between the ESGS and financial performance (Galema et al., 2008; Horvath, 2010; Orlitzky et al., 2003; Statman, 2006)

On the other spectrum, the majority of the extant studies have used the stakeholder theory to explain the positive relationship between ESGS and financial performance ( Brooks & Oikonomou, 2018; Aboud &Diab, 2018; Yoon et al., 2018). They document that the key tool for improving financial performance is managing stakeholder relationships between the company  and the stakeholders. As per stakeholder theory (Freeman, 1984), companies are responsible for customers, employees, shareholders, and investors and   managers should pay attention to stakeholders' interests, as good relationships with stakeholders can indirectly boost financial results . Furthermore, it is predicted that the integration of environmental and social responsibility into corporate strategies reduces company risk and promotes long-term value creation (Yu & Zhao, 2015). This will lead to a higher level of shareholder value and competitive advantage for companies (Bernardi & Stark, 2018, Li et al., 2018). From the stakeholder and agency perspectives, companies are required to adopt a more long-term, sustainable value view, as stakeholders are concerned about a company's ESG factors, including where it invests and how it conducts business (Atan et al., 2018; Eccles et al., 2014).  This is supported by researchers (Aboud Diab & ,2018) who state that a company with socially and environmentally responsible practices combined with good governance practices will satisfy the needs of stakeholders and enhance financial performance. Tantalo & Priem (2016) believe that each essential stakeholder group (including investors, creditors, employees, customers, and regulators) supports ESGD as a potential source of value creation. On the same lines, companies that are involved in ESGD improve their efficiency, strengthen their reputation, and increase their profitability. (Li et al., 2018).

The resource-based theory is suggestive of a positive relationship between ESGD and financial performance and propounds that ESGD may help companies to develop new internal resources as well as generate external benefits through company reputation (Branco & Rodrigues, 2006). According to the resource-based theory, companies that have superior ESG-related disclosures, gain competitive advantages (Branco & Rodrigues, 2006). Another view suggests that companies invest in ESG practices depending on the availability of financial resources (Aguilera-Caracuel et al., 2015; Allouche & Laroche 2005; Waddock & Graves 1997). If companies have resources that can be reallocated, managers will take more innovative actions, satisfying stakeholders' demands (Voss et al., 2008). However, companies are more likely to adopt conservative strategies when financial resources are limited, investing in what they consider to be fundamental for survival (Aguilera-Caracuel et al., 2014).

Summarising the discussions so far, the research proposes the following hypothesis (H):

H1: There is a positive relationship between ESGS and the ROA of New Zealand companies.

H2: There is a positive relationship between ESGS and the ROE of New Zealand companies.

H2: There is a positive relationship between ESGS and Tobin Q of New Zealand companies.

## 2.2 ESG and Financial Slack

Financial resources play a role in determining how a company invests funds in ESG-related related projects (Aguilera-Caracuelet al., 2015; Allouche & Laroche 2005; Surroca et al., 2010; Waddock & Graves 1997).

Companies allocate resources to innovative projects when there are surplus financial resources available to satisfy stakeholders (Voss et al., 2008). In contrast, when financial resources are scarce, companies tend to focus on profitable activities since it is difficult to invest in ESG initiatives because of a lack of financial resources (Sharma, 2000). Apart from reducing costs, ESG initiatives can also improve the visibility and reputation of a company (Aguilera-Caracuel et al., 2017; Miles & Covin 2000). Brammer and Millington (2008) and Velte (2016) conclude that increased transparency of ESG activities by companies have a significant impact on their financial performance.

Summarising the discussions thus far, the research investigated how FS moderates the relationship between ESGS and company financial performance and proposes the following three additional hypotheses:

H4: The availability of FS improves the relationship between ESGS and the ROA of companies.

H5: The availability of FS weakens the relationship between ESGS and ROE of companies.

H6: The availability of FS weakens the relationship between ESGS and the Tobin Q of companies.

Figure 1 – Framework Model Showing the Potential Moderating Effect of Financial Slack.
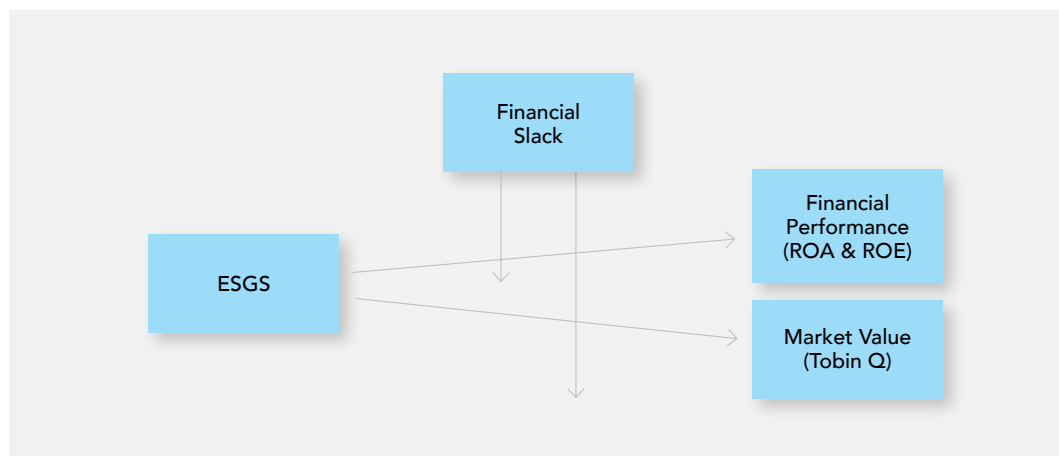


## 3. DATA AND METHODOLOGY

### 3.1 Data

The sample for the research consists of New Zealand publicly listed companies with complete data available from DataStream. Quarterly data has been collected for the research ranging from the first quarter of 2010 to the first quarter of 2021, consisting of 11 years or 46 quarters. All continuous variables are winsorized at 5% and 95% levels to eliminate the effect of outliers. Companies engaged in the business of tobacco, alcohol, controversial weapons, and gambling operations have been excluded from the research.

### 3.2 Methodology

The research investigated the effect of ESGS on companies' financial performance and market value by using the fixed effects model as this considers the variation in time and cross-sections. To overcome the problem of omitted variables and endogeneity, the model includes control variables. Furthermore, to determine multicollinearity among independent variables, Variance Inflation Factor (VIF) is estimated. A VIF value of 1 means there is no correlation between independent variables in the model and a VIF value of 1-5

indicates a moderate relationship between a given explanatory variable and its explanatory variables, but it is not severe enough to require attention. While a VIF greater than 5 indicates that there is a high correlation between variables and regression analysis cannot be carried out.

For determining the effect of ESGS on financial performance and market value, three regressions were performed with ROA, ROE, and Tobin Q as the dependent variables. The first set of panel data regression analysis was completed to examine the relationship between ESGS and dependent variables namely the market value (Tobin Q) and financial performance (ROA and ROE).

$$ROA_{it} = b_0 + b_1 ESGS_{it} + b_2 size_{it} + b_3\ leverage_{it} + e \tag{1}$$

$$ROE_{it} = b_0 + b_1 ESGS_{it} + b_2 size_{it} + b_3\ leverage_{it} + e \tag{2}$$

$$TobinQ_{it} = b_0 + b_1\ ESGS_{it} + b_2\ size_{it} + b_3\ leverage_{it} + e \tag{3}$$

where 'it' represents the company' i' in year 't'; 'b0' is the constant term, and 'e' is the error term.

The next set of regression was used to determine the change in the relationship between ESGS and the company's financial performance due to moderating variable and to test the hypothesis that the impact of ESGS disclosure on company financial performance will be enhanced in companies with FS as a moderating variable. The analysis was performed using the same baseline regression model with FS as a moderating variable.

### 3.3 Measurement of Variables

The research evaluated the companies' performance along three dimensions: financial, operational, and market performance measured by ROE, ROA, and Tobin Q. Financial leverage and company size were control variables in the research.

The dependent variables were based on previous studies, with the ROA variable chosen as a measure of profitability, as it is one of the broadest measures of a companies' operating performance (Russo et al., 1997) Additionally, it is used to measure the efficiency of a company enterprise in utilising its property to generate revenue. The second dependent variable is ROE which indicates how successful companies manage their capital (net worth) and how profitable their investments are as shareholders of the company. The third variable Tobin Q, was used to assess the market value of the companies (Aboud Diab ,2018; El Ghoul et al., 2017 &; Li et al., 2018). This variable has been extensively used to measure the market value of companies, e.g., Albertini (2013), Garg (2015), Yu and Zhao (2015). It is both a measure of past financial performance and a representation of future development expectations (Li et al., 2019). Tobin Q is calculated as the sum of market capitalisation and the book value of total assets minus net worth divided by the book value of total assets.

An ESGS was the independent variable, and it ranges from 0 to 100 based on the amount of ESG data disclosed by companies. Recently, ESGS provided by Bloomberg have been widely used in the academic literature (Manita et al., 2018 ;Nollet et al., 2016).

Financial slack was used as a moderating variable. It was measured by the amount of liquid assets that are available for investing in various activities by a company (Kraatz & Zajac 2001). Financial slack is calculated by dividing current assets by current liabilities.

Company size and financial leverage were used as control variables. Studies have indicated that company size and financial leverage are key control variables when testing the impact of ESGS on financial performance (Andersen & Dejoy, 2011; Margolis et al., 2009). According to Sen (2011), a company's size is significantly related to its ESGS. Several studies have demonstrated that large companies may be more efficient since they can utilise economies of scale, employ more skilled managers, and formalise procedures to produce better results (Naik, 2014). Company size is measured as the log of its total assets. Leverage

refers to a company's use of borrowed funds. It is measured by the ratio of total liabilities to the net worth of the company. In the research, leverage is included since financial institutions traditionally pay more attention to ESG information as leverage increases (Ghosh, 2013).

## 4. EMPIRICAL RESULTS

### 4.1 Univariate Analysis

Table 1 – Table showing summary statistics for all variables

| VARIABLE | N | MEAN | MEDIAN | MIN | MAX |
|---|---|---|---|---|---|
| ROA | 2,507 | 4.5 | 10.6 | -29.3 | 57.7 |
| ROE | 2,524 | 8.1 | 14.2 | -32.5 | 37.5 |
| Tobin Q | 2,555 | 1.5 | 1.9 | 0.2 | 8.6 |
| ESGS | 2,499 | 24.6 | 16.2 | 0.0 | 70.6 |
| Company Size | 2,761 | 13.4 | 1.5 | 10.3 | 15.8 |
| Leverage | 2,015 | 2.4 | 3.9 | 0.1 | 19.8 |
| FS | 2,507 | 4.5 | 10.6 | -29.3 | 57.7 |

Notes: This table shows summary statistics for all variables. Summary statistics include number of observations(N), mean, standard deviation, median, minimum(Min), and maximum(Max) values of all variables.

Table 1 reveals summary statistics for selected dependent, independent, and control variables. The descriptive statistics includes minimum, maximum, mean, and standard deviation for the dependent, independent, and control variables. The sample, ROA has a mean of 4.5 (median = 10.6), ROE has a mean of 8.1(median = 14.2) and Tobin Q has a mean of 1.5 (median = 0.2). Based on the mean values in the sample, it can be concluded that the companies in the sample are profitable. Companies have a mean ESGS of 24.6 (median = 16.2).

On average companies' current ratio is 4.5, which is a measure of short-term stability. On average, leverage of the companies in the sample is 2.4 and the mean company size is 13.5 (median = 10.6).

Table 2 – Correlation Matrix for all variables

| | ROA | ROE | TOBIN Q | ESGS | FS | LEVERAGE | COMPANY SIZE |
|---|---|---|---|---|---|---|---|
| ROA | 1 | | | | | | |
| ROE | 0.92 | 1.00 | | | | | |
| Tobin Q | -0.12 | -0.13 | 1.00 | | | | |
| ESGS | 0.17 | 0.16 | -0.02 | 1.00 | | | |
| FS | -0.14 | -0.22 | 0.29 | -0.08 | 1.00 | | |
| Leverage | -0.07 | -0.02 | -0.25 | 0.09 | -0.11 | 1.00 | |
| Company size | 0.19 | 0.20 | -0.44 | 0.33 | -0.22 | 0.33 | 1 |

According to the correlation matrix, ROA and ROE are positively correlated with ESGS, but there exists a negative correlation between Tobin Q and ESGS. The coefficients for the independent variables are all below .80, which means that there is no significant correlation between them.

According to the test result of VIF, the value between independent variables is 1.8. Therefore, the results are not biased by the problem of multicollinearity.

### 4.2 Multivariate analysis

Table 3 – Fixed Effects Panel Data Regression

| VARIABLES | ROA | ROE | TOBIN Q |
|---|---|---|---|
| ESGS | -0.076*** (0.000) | -0.124*** (0.000) | 0.029*** (0.000) |
| Leverage | -0.161 (0.000) | -0.171*** (0.000) | 0.002 (0.344) |
| Company Size | 5.530*** (0.000) | 6.729*** (0.000) | -1.090*** (0.000) |
| Constant | -65.28*** (0.000) | -76.35*** (0.000) | 15.61*** (0.000) |
| R squared | 0.1227 | 0.1425 | 0.344 |
| Observations | 1,569 | 1,572 | 1,573 |

Note: Table 3 presents the estimation results of the fixed effect panel regressions for three different outcome variables; ROA, ROE, and Tobin Q. All variables were winsorized at 5%. p-values are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Based on the first set of fixed term panel regressions, the ESGS negatively affects financial performance. Results indicate a negative significant relationship between ESGS with ROA and ROE, which is in line with the studies completed by Brammer et.al. (2006). Furthermore, the results suggest that ESG activities lead to additional costs for companies and lowers their financial performance. Hence, hypotheses 1 and 2 are rejected.

Additionally, results indicate a positive and significant relationship between ESGS and Tobin Q. Hypothesis 3 is accepted which suggests that the ESGS increases the value of the company. The findings of the study are consistent with stakeholder theory (Aboud & Diab , 2018; Brooks & Oikonomou,2018 & Yoon et al.2018), which suggests that ESG activities satisfy the needs of stakeholders and enhance financial performance. In addition, the results support the resource-based theory (Branco & Rodrigues, 2006), which states that ESG activities lead to internal resource development and increased corporate reputation.

Table 4 – Fixed Effects Panel Data Regression with Moderating Variable

| VARIABLES | ROA | ROE | TOBIN Q |
|---|---|---|---|
| FS | 0.034*** (0.000) | 0.042*** (0.000) | 0.000 (0.979) |
| Leverage | -0.179*** (0.000) | -0.187*** (0.000) | 0.003 (0.309) |
| Company Size | 5.843*** (0.000) | 7.318*** (-0.662) | -1.145*** (0.000) |
| Constant | -67.15*** (0.000) | -80.46*** (0.000) | 16.15*** (0.000) |
| R squared | 0.103 | 0.095 | 0.347 |
| Observations | 1,212 | 1,246 | 1,240 |

Note: Table 4 presents the results of the fixed effects panel regressions for three different outcome variables: ROA, ROE, and Tobin Q with FS as a moderating variable. All variables were winsorized at 5%. p-values are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 4 shows the results of the fixed effects panel regression analysis with FS as a moderating variable. The empirical results suggest that FS has a significant impact on the relationship between ESGS scores and the financial performance of New Zealand companies. It is interesting to note that, with the appearance of moderating variables, the observed linkages between companies' ESGS and financial performance have increased significantly. It was found that with the existence of FS there is a significant positive relationship between ESGS and financial performance measures, ROA, and ROE. This indicates that when companies have surplus funds, they invest in ESG-related activities which enhances companies' performance when FS is taken as a moderating variable. The results show that managers view environmental activities as a long-term option and only invest in sustainability activities when they have extra funds (Aguilera-Caracuelet al., 2015; Allouche & Laroche 2005; Surroca et al., 2010; Waddock & Graves 1997).

## 5. ANALYSIS & DISCUSSION

The research illustrates the impact of the ESGS on financial performance and market value for companies in New Zealand. Financial indicators and ESGD demonstrate the validity of stakeholders' theory and indicate that shareholders are concerned about the company's ESG activities. This is in line with studies completed by Bernardi and Stark (2018),Yu and Zhao 2(015),and Li et al.(2018)who suggest that companies with socially and environmentally responsible practices combined with good governance practices satisfy the needs of stakeholders and enhance market value. However, the negative relationship between ESGS and ROA, and ROI indicate that ESG-related activities add additional expenses for companies (Branco & Rodrigues 2008; Brammer et al., 2006; Lee et al., 2000) and lead to financial disadvantage.

Second, with FS as the moderating variable, the linkages between companies and financial performance alter. An interesting conclusion can be drawn from the findings that when managers no longer need to worry about repayment times, and short-term expenses and have sufficient financial reserves, they are more likely to support ESG investments or initiatives to meet the needs of their various stakeholders. This is in line with studies conducted by Aguilera-Caracuelet al. (2015), Allouche & Laroche (2005), Sharma (2000), Surroca et al. (2010), and Waddock and Graves (1997).A positive relationship between financial performance and environmental concerns suggests that companies view environmental investments as a long-term strategy to increase their reputation and attract investors (Bassen & Kovacs 2008; Tantalo & Priem, 2016) rather than a short-term strategy. Furthermore, the results show that companies tend to

incorporate ESG activities into their strategy because it provides a competitive advantage.

Third, the empirical results provide a rationale for policymakers to enact the ESG framework for companies to update their ESGD and notify all stakeholders of the financial and social outcomes of their activities. In addition, the research offers insight to the government to create long-term incentives for companies adopting ESG-related practices in their strategies and objectives.

## 6. SCOPE AND LIMITATIONS

The research examines how the total ESGS affects the financial performance of companies, but it can also be replicated using individual ESG parameters to gain a wider perspective. The sample size was small as the research relied on data being provided by companies that disclosed their ESGS. There is potential for future studies to be conducted using   a wider range of countries and a larger sample size.

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# THE CONTRIBUTING FACTORS TO THE HIGH TURNOVER OF EARLY CHILDHOOD EDUCATION TEACHERS IN AUCKLAND, NEW ZEALAND

Maria Abigail Andres, Barnaby Pace and Indrapriya Kularatne

## ABSTRACT

The objective of this investigation is to explore the contributing factors that cause the high turnover rate of Early Childhood Education (ECE) Teachers in Auckland, New Zealand. ECE teachers in this sector who have a history of leaving their childcare centres were interviewed in order to collect primary data. Thematic analysis was applied to the interview data to elicit the factors that cause ECE teachers to leave or stay in their current childcare centre, and practical strategies that childcare centre managers can adopt to increase the retention rate of their ECE teachers. Based on the findings, there are four predominant turnover factors: failure of the management to carry out their roles effectively, relational issues, heavy workload and low salary. Accordingly, four practical managerial strategies were recommended: increase management's support to their ECE teachers by maintaining a manageable teacher-to-child ratio, instil a healthy team culture, offer a commensurate salary and increase the level of appreciation for ECE teachers.

Keywords: Early Childhood Teachers, Turnover, Early Childhood Education, Retention, Factors

## 1. INTRODUCTION

Research shows that families who participate in quality Early Childhood Education (ECE) services get advantages because parents can work and contribute to the economy while their children are learning and being cared for by ECE teachers (Horwood & McLeod, 2017; Mitchell, 2011; Stuart, 2018). The support and education received by the children prepare them for success in their future life (Horwood & Mcleod, 2017). However, these benefits require high-quality ECE services, as indicated by having an emotionally supportive atmosphere for the children, small group sizes, care continuity and low staff turnover (Recchia & Fincham, 2019). Unfortunately, the quality of childcare services is diminished when any of these indicators are poor such as when staff turnover is high. Research indicates that low teacher turnover is a significant indicator of a quality ECE (Holochwost et al., 2009; Huntsman, 2008).

Thus, it is important to investigate high staff turnover in ECE services because it is associated with many drawbacks to the stakeholders of the ECE community (Holochwost et al., 2009). Firstly, high staff turnover rates in childcare centres diminish the quality of work of the remaining teachers (Cumming 2015; Whitebook & Ryan, 2011). The remaining teachers absorb the tasks, therefore, increasing their stress and workload (Grant et al., 2019). The expertise of the remaining teachers is compromised since management allocates resources to train new ECE teachers instead of building the professional skills of the remaining teachers (Jeon & Wells, 2018). Secondly, the constant change in the teachers destabilises the relationship between the child and the teacher (Holochwost et al., 2009). This interrupts the learning process of the child since they need to build their trust relationship again with their new teachers (Jeon & Wells, 2018; Mohr et al., 2011).

High teacher turnover is a significant challenge faced by the ECE sector in many countries like the United States of America (USA), Australia and New Zealand (Bretherton, 2010; Jones et al., 2017). Stuit and Smith (2009) explained turnover as the teacher's voluntary or involuntary leaving from the profession and the transfer from one childcare centre to another. This research will focus on the factors that cause teachers to voluntarily leave and transfer to another workplace.

The issue of turnover has also become prevalent in the New Zealand ECE sector. The turnover rate of ECE teachers in 2012 is 18% higher than primary teachers (Ministry of Education, 2020). ECE teachers educate and care for babies and children up to five years old, while primary teachers teach children between five and 13 years old in a formal classroom setting ("Careers.govt.nz", 2020). While the Government of New Zealand reported that the turnover rate of ECE teachers in 2014 improved by 4%, it was still greater than the turnover rate of the national workforce (Ministry of Education, 2014). Based on the Ministry of Education, the difference in the turnover rate between the two sectors is high. Although both teachers (ECE and primary) have similar qualifications, the difference in the turnover rate lies in the significant difference in their working conditions (Ministry of Education, 2014). According to Cumming (2015), primary teachers receive higher salaries, work shorter hours and have longer holidays. On the other hand, according to a recent study by Recchia and Fincham (2019), ECE teachers belong to the poorer paid workers and are supported less to develop their professional skills. For these reasons, this research will focus on the turnover rate of teachers in the ECE sector, specifically those employed in education and childcare centres.

This research has two aims; they are to identify the factors that motivate ECE teachers to leave their childcare centre and to investigate factors that motivate ECE teachers to stay in their current ECE centre. The research questions investigated in this research are

1. What factors motivate ECE teachers to leave or stay at their current childcare centres?
2. What practical strategies can ECE childcare centre managers apply to increase the retention rate of their ECE teachers?

## 2. LITERATURE REVIEW

This section will present an overview of the existing literature on the turnover of ECE teachers in the ECE sector. Parameters were set in selecting which articles to review: (1) publish date is between 2010 to 2020, (2) focus on ECE teachers in the ECE field, (3) set in countries with a comparable model to New Zealand, such as Australia and England.

### 2.1 Factors that cause ECE teachers to leave

Early Childhood teachers' motivation in leaving is categorised into three factors (Jeon & Wells, 2018): (a) personal background factors such as marital status and age; (b) external non-work-related factors such as illness in the family and relocation; and (c) internal work-related factors such as compensation and job-related stress.

This research focuses only on internal work-related factors because these factors: (a) have the most considerable influence on the quality of services delivered by the ECE teachers (Cumming et al., 2015); (b) significantly impact the well-being and job satisfaction of ECE teachers, which impact an ECE teacher's decision to stay or leave their current childcare centre (Jeon & Wells, 2018); and (c) management has direct control over the internal work-related factors such as salary, work environment, and professional growth, as opposed to the other external work-related factors (Sun & Wang, 2016).

The data extracted from articles discussing factors that motivate ECE teachers to leave are summarised in Table 1. Based on this review, low salary, work-related stress, lack of professional status, heavy workload and relational issues with co-workers are the key factors.

Table 1 – Factors that motivate ECE teachers to leave their childcare centre according to literature

| FACTORS IDENTIFIED | TARGET COUNTRY | REFERENCE |
|---|---|---|
| – Incommensurate salary<br>– Lack of professional status<br>– Work-related stress<br>– Limited career development | Australia | Cumming et al. (2015) |
| – Personal reasons such as salary<br>– Workload<br>– Relational issues | USA | Wells (2015) |
| – Salary level<br>– Education level<br>– Job satisfaction<br>– Emotional competence | USA | Hall-Kenyon et al. (2013) |
| – Working conditions<br>– Salary level<br>– Low status | Australia | Bretherton (2010) |
| – Salary level<br>– Work environment<br>– Work-related stress<br>– Lack of recognition | Australia | Jones et al. (2017) |
| – Stress<br>– Burnout | England | Pliogou et al. (2016) |
| – High workloads<br>– Search for new challenges<br>– Lack of support<br>– High teacher-to-child ratio | Australia | Jovanovic (2013) |
| – Insufficient salary<br>– Demanding work conditions<br>– Inconsistent professional development programmes | USA | Ullrich et al. (2017) |

### 2.1.1 Low salary

The majority of participants in previous research studies identified low salary level as a factor why ECE teachers move from one childcare centre to another (Bretherton, 2010; Cumming et al., 2015; Jones et al., 2017; Wells, 2015). Similarly, the authors made a direct connection between the job satisfaction of ECE teachers and their level of salary. Bretherton (2010) revealed that there was a connection between the salary and the professional status of ECE teachers, and they lack professional status due to their salary rate. Meanwhile, Cumming et al. (2015), Jones et al. (2017) and Wells (2015) identified low salary as a common work challenge for ECE teachers. The incommensurate salary influences the ECE teacher's motivation to stay or leave their workplace (Cumming et al., 2015; Jones et al., 2017; Wells, 2015). On one hand, the research of Hall-Kenyon, et al. (2013) offers a contradicting finding to Bretherton's (2010) paper about the compensation level having an impact on the ECE teacher's decision to stay. According to Hall-Kenyon et al. (2013), the salary level of teachers is an essential component in the well-being of ECE teachers, but it does not directly influence the ECE teacher's decision to stay.

### 2.1.2 Work-related stress

Pliogou et al. (2016) discussed that the most common occupational challenges of ECE teachers are stress and burnout. Hall-Kenyon et al. (2013) revealed that while some ECE teachers find toileting and feeding stressful, other ECE teachers consider interacting with parents and children as a less stressful task. Furthermore, Pliogou et al. (2016) explained that there is no definite interpretation of the impact of stress on ECE teachers because individuals cope with stress differently. These authors stated that ECE teachers are frequently subjected to stress and burnout due to the nature of their work. Jones et al. (2017) indicated that a high-stress level at work pushes ECE teachers to leave their workplace, thus increasing the turnover rate. The articles of the following authors validate the finding that the stress level of ECE teachers impacts their decision to stay or leave the childcare centre (Pliogou et al., 2016; Cumming et al., 2015; Jones et al., 2017; Wells, 2015).

### 2.1.3 Lack of professional status

Cumming et al. (2015) showed that ECE teachers consider the lack of professional status as an occupational challenge, which drives their motivation to stay or leave their childcare centre. Previously, Bretherton (2010) related how the low salary of ECE teachers impacts how they perceive their job status. The apparent correlation between salary and status points to how their status as ECE teachers is defined by the amount of salary that they receive.

### 2.1.4 Heavy workload

Jones et al. (2017), Wells (2015) and Hall-Kenyon et al. (2013) discussed another factor that influences an ECE teacher's decision to leave is the heavy workload and responsibilities. Wells (2015) discussed that the challenging behaviour of some children lead to ECE teachers' physical and emotional exhaustion. Similarly, Hall-Kenyon et al. (2013) stated that ECE teachers continuously struggle with maintaining their physical and emotional well-being due to the heavy workload expected from them. Aside from taking on the role of an educator and caregiver, ECE teachers are expected to take on non-teaching duties such as documentation and procurement of materials (Hall-Kenyon et al., 2013). Furthermore, Jovanovic (2013) elaborated that the vast job scope of ECE teachers contributes to their arduous and demanding work conditions.

### 2.1.5 Relational issues with co-workers

Wells' (2015) reported that relational issues with co-workers were one of the factors that reduce the job satisfaction of ECE teachers. Conflicts among co-workers are commonly caused by the lack of communication and support for ECE teachers. Hall-Kenyon et al. (2013) added that ECE teachers who are not able to relate to co-workers positively are more likely to experience conflict with co-workers. Additionally, they have stated a healthy relationship among co-workers is essential in creating a good team dynamic within the workplace, this is particularly important since ECE teachers work in teams. ECE teachers rely on one another to create a healthy team culture (Ullrich et al., 2017). Jones et al. (2017) confirm the findings of Hall-Kenyon et al. (2013) regarding team support, stating that the fundamental psychological needs of relatedness are fulfilled when ECE teachers support one another.

### 2.2 Strategies to increase the retention rate of ECE teachers

This section compiles scholarly articles with the overarching theme of increasing the retention rate of ECE teachers worldwide, particularly the strategies that may be applied at a managerial level. Such strategies are relevant to the second research question of this research, specifically practical strategies that childcare centre managers can apply to increase the retention rate of their ECE teachers.

The strategies identified in the literature are summarised in Table 2.

Table 2 – Strategy Analysis Framework

| STRATEGY AND (FOCUS) | VALUE CREATION | CULTURE | REFERENCE |
|---|---|---|---|
| Skill development (Professional development) | – Create opportunities for professional advancement<br>– Create a long-term and sustainable supply of ECE teachers | – Skill acquisition<br>– Support | Bretherton (2010) and Cumming et al. (2015) |
| Pedagogical leadership (Quality improvement) | – Foster a supportive learning atmosphere for ECE teachers to implement learned theories into action plans | – Support<br>– Collaboration with ECE teachers<br>– Strategic alignment | Pliogou et al. (2016) and Coughlin & Baird (2013) |
| Group-oriented culture (Belongingness and participation) | – Develops healthy working relationships among employees<br>– Builds employee's work morale | – Trust<br>– Loyalty<br>– Commitment | Mohr et al. (2011) |
| Improved Salary (Salary and professional development) | – Increase the professional status of ECE teachers<br>– Create opportunities for professional growth | – Employee morale<br>– Competence | Ullrich et al. (2017) |
| Satisfied employees (Job satisfaction) | – Develop confident and competent ECE teachers | – Competence<br>– Self-confidence<br>– Respect<br>– Open communication | Jones et al. (2017) |

## 3. RESEARCH METHODOLOGY

The section is divided into three parts. First, the research design will be presented. Followed by the data collection and finally, ends with the data analysis and the detailed process of analysing the data.

### 3.1 Research Design

The literature review in the previous section reveals a gap and how more extensive research in the New Zealand ECE sector is necessary. Although the research topic is widely studied in other countries primarily the USA (Jones et al., 2017) and Australia (Jovanovic et al., 2018), it has not yet been studied extensively in New Zealand despite its prevalence. Boxall et al. (2003) examined the turnover of employees in New Zealand in general by applying an exploratory research design. Also, Elmusharaf (2012) recommended exploratory research design for topics that are not yet widely explored in potential settings where such issues exist. As such, an exploratory research design was a suitable design for this research topic. According to the 2019 Census, the Auckland region has the highest density of operating and licensed childcare centres in New Zealand (Ministry of Education 2020). Thus, this research will be limited only to the Auckland region.

## 3.2 Data Collection

Data were collected by conducting semi-structured telephone interviews with ten ECE teachers who have a history of leaving their childcare centre. Since interviews are time-consuming (Kyngäs et al., 2020), the number of interviewees was limited to ten. Convenience sampling was used; which means sourcing a sample population from a pool of people who are easily accessible to the researcher (Elmusharaf, 2012). This process eased the procedure of inviting people to participate in the interview (Kyngäs et al., 2020). The researcher invited ECE teachers who have a history of leaving to voluntarily participate in the interviews. This research was approved by the Otago Polytechnic Auckland International Campus Research Ethics Committee.

The semi-structured interviews were used to collect data. Using this technique made it easier to analyse the data, and the flexibility of the semi-structured interviews allowed the interviewer to ask further questions based on the participant's responses (Galletta, 2013). Additionally, this method generated rich narratives from the participants explaining the reasons why they left their previous childcare centres. This method also enabled the researcher to approach this research using a naturalistic inquiry philosophy (McInnes et al., 2017), gathering rich data that assisted the researcher in understanding the motivations of the participants for leaving or staying in their childcare centres.

The objective of naturalistic research is to see information as something descriptive and changing in order to study people's experiences and behaviour (Kyngäs et al., 2020). The same authors mentioned that recruiting participants who have the relevant background and experiences in the area of research is paramount because the interpretation of the participant's personal experiences plays a crucial role in unravelling their motivations for their decision. This research applied a naturalistic inquiry approach because it required analysing and understanding the factors that cause ECE teachers to leave their childcare centres. This is essential considering that the decisions of the ECE teachers dictate the turnover rate.

Initially, the data was supposed to be collected through face-to-face interviews. However, due to the COVID-19 pandemic, interviews had to be undertaken through telephone calls. It was assumed that the change in the mode of the interview had no impact on the outcome of the research. Data saturation was reached upon interviewing ten participants, ECE teachers that had left their childcare centres. This proves that the interviews have generated sufficient, valid and reliable data for analysis.

## 3.3 Data Analysis

The collected data were analysed using a thematic analysis method. Harding (2018) explained thematic analysis as applying an inductive approach combined with finding common themes that emerge from the data collected. Guest et al. (2011) recommended thematic analysis as an efficient tool to analyse and organise data collected through semi-structured interviews. The inductive approach in analysing the interview data is another significant component of a thematic analysis method (Harding, 2018). According to Guest et al. (2011), this inductive approach is descriptive and exploratory. This approach was applied in analysing collected qualitative data. This researcher read the data several times to find words, phrases and common themes. Prior to analysing the collected data, the factors identified by the participants were categorised in order to identify the common and related factors that increase their probability of leaving their childcare centres. The transcribed data was used to identify recurring words and phrases, this process was referred to as open coding, which means labelling and organising the data collected (Tracy, 2019). During the open coding process, the following 13 recurring words and phrases were identified: follow through with promises, goal setting, heavy workload, management, organising, planning, salary, stress, ECE teacher-only day, team building, teams, teamwork and transition. The next step, axial coding was applied and entailed grouping together various codes under a hierarchical umbrella category that makes conceptual sense ranking the codes into groups according to importance (Tracy, 2019). To achieve this, the number of recurrence or repetitions of the answers were recorded. Table 3 illustrates the words that appeared in the text and the frequency of occurrence.

Table 3 – Axial Coding format in recording repetitions and categorising words

| WORD/PHRASES | FREQUENCY | CATEGORY |
|---|---|---|
| Poor management | 6 | Management |
| Growth | 5 | Career Advancement |
| Follow through promises | 4 | Management |
| Increase salary | 5 | Compensation Level |

Finally, the codes, or the factors, were grouped into themes. The connections between the codes played a significant role because they generated the main findings of this research. Four predominant factors caused a participant; an ECE teacher, to leave their childcare centre: management-related challenges, relational issues, workload and salary.

## 4. RESULTS AND FINDINGS

This section will present the primary data collected from the semi-structured interviews with participants, ECE teachers who have a history of leaving their childcare centres. The findings of this research were categorised under two main areas: factors related to ECE teacher turnover and factors that increase the motivation of ECE teachers to stay in their childcare centres.

### 4.1 Factors related to ECE teacher turnover

Each participant was assigned a number for the purpose of anonymity (e.g., P#1 means participant number 1). Each participant provided on average seven different turnover reasons, thereby generating a total of 39 turnover factors. Also, the factors were all work-related. Non-work-related reasons for turnover, such as pregnancy, were not included because this research as it was limited to work-related factors. Based on the responses of the participants, the four most significant turnover factors were management-related issues, team-related issues, heavy workload and salary levels (illustrated in Figure 1).

Figure 1 – Significant turnover factors based on the frequency of responses from the participants
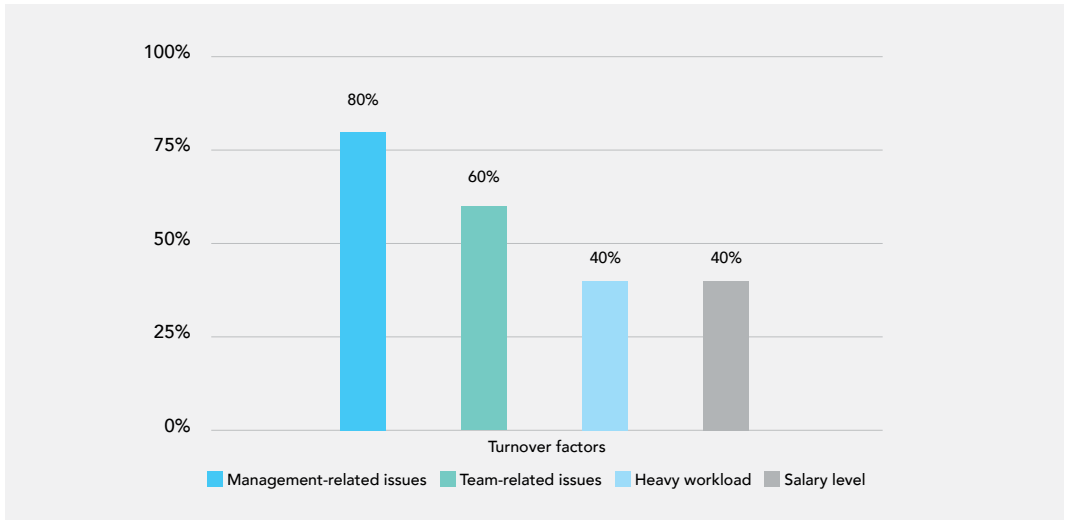
### 4.1.1 Management-related issues

Issues related to the management of childcare centres were the most frequently cited turnover factor; 80% of the participants cited management issues as one of the primary reasons for leaving their childcare centre. These factors are considered significant because they triggered the participants' decision to leave. The major theme of management-related challenges is divided into two subthemes: (a) management's failure to carry out their roles effectively and (b) unprofessional human resource management.

#### 4.1.1.1 Management's failure to carry out their roles effectively

Management's failure to carry out its leadership roles effectively contributed to the participant's decision to leave their childcare centre. Management carries out the role of allocating resources so that the ECE teachers can achieve the childcare centre's goal. Unfortunately, some childcare centres have failed to do this. P#10 shared:

> "And the general manager promised they would try to work the issues, trying to provide outside resources which were lacking as well. Trying to provide those things which should have been provided earlier other than when staff decided to leave."

Management failed to provide enough resources to enable the participants to design a safe learning environment for the children. Participants perceived such failure as a lack of support from management. Eventually, this challenge spiralled another co-worker down to participants feeling ineffective as they could not offer a high standard of service that they felt the children deserved. Participants viewed management as the forerunner in implementing policies fairly among ECE teachers. Unfortunately, some participants experienced management being lenient and biased in imposing policies and procedures, which resulted in team conflict. P#1 narrated how their previous management's decision to hire family members and friends caused division among the ECE teachers. P#5 participant shared an instance when their childcare centre underwent a change in ownership. Management failed to enforce clear policies and procedures to guide the ECE teachers during the transition, which caused conflict and confusion among them. A pattern was observed when management was unable to fulfil their roles. It often produced conflict among the ECE teachers which affected their relationship with their managers and co-workers.

#### 4.1.1.2 Unprofessional human resource management

Another sub-theme discovered from the collected data was the inappropriate management of ECE teachers in the form of bullying from managers and co-workers. Two participants experienced being bullied by their childcare centre managers leading them to have low self-morale at work. P#8 shared the experience of being screamed at and scolded by the manager. Another participant approached the same manager to report another co-worker who was bullying the respondent. Unfortunately, the manager's response was unsupportive. P#6 said:

> "I ended up being bullied by the manager as well. Obviously, I went to my manager about it when I was being bullied by the team. I ended up also being bullied by my manager."

Two other participants shared how their managers' treatment of ECE teachers was impartial. The manager treated their ECE teachers subjectively. P#4 shared the experience:

> "I already heard that they have a high turnover because management is crap. They are not happy with the management. I can say to you if the manager does not like the person, they will lay them off."

The unprofessional management of ECE teachers led the childcare centre's turnover rate to skyrocket, according to P#4. The turnover was evident because they were always looking for new ECE teachers. The result of management's improper human resource management has diminished self-respect and self-confidence. This led to ECE teachers feeling unsatisfied with their childcare centre, causing them to look for another employer.

### 4.1.2 Team relational issues

The second significant turnover factor was relational issues among co-workers leading to team-related issues. The factor was cited by 60% of the participants as a primary turnover factor. Relational issues apply to all levels of relationships, including co-workers and managers. ECE teachers work in teams most of the time and depend on each other to ensure that all the children are looked after. Conflict within the team creates a stressful environment for the ECE teachers. P#3 shared the reason why they felt overworked was the lack of cooperation and distribution of equal work among co-workers. Also, bullying by co-workers was also experienced by P#6:

> *"I left there because of horrible workplace bullying. And I was not supported (by the management); that was very bad. I had to leave."*

P#8 shared a similar story and recounted how other ECE teachers bullied them by using derogatory words against them and shouting at them when she committed faults at work. Participants who were bullied experienced anxiety going to work. Eventually, a toxic work atmosphere developed, which caused the participant to leave their childcare centre. The quality of the professional relationships effects their disposition as an ECE teacher. Conversely, this research showed that ECE teachers who had good relationships and perceptions of their managers were less likely to leave from their childcare centre because they could easily communicate issues with their managers.

### 4.1.3 Heavy workload

The third significant turnover factor was the heavy workload; 40% of the participants cited overwhelming work responsibilities combined with low salary as a major contributing factor in their decision to leave their childcare centres. The workload per se is not the turnover factor, but the workload was compounded by other factors such as low salary and lack of management support. Participants shared that one of the causes of the heavy workload was the high teacher-to-child ratio. The problem is aggravated when management does not provide support by hiring enough ECE teachers or relievers to maintain a healthy teacher-to-child ratio. When a participant was asked about the reason why they left their previous childcare centre, P#9 said:

> *"The one that I've resigned from recently, highly stressful job, not much support. Overworked. I was always tired and grumpy. I would have preferred 1:8 (ratio of teacher-to-child), probably. If I think of it if the teacher goes off for a break. Cos there is only two teachers. It gets so stressful."*

The participants explained how their well-being as an ECE teacher was negatively affected by their workload. Although they raised the issue with management, they failed to resolve the issue, leaving the participant with no choice but to leave the childcare centre. Another similar story was shared by P#8, who is contemplating leaving the current childcare centre due to a heavy workload.

### 4.1.4 Salary levels

The low salary of ECE teachers is a common issue that the participants raised in the interviews. However, it is not a turnover factor by itself. It only becomes a factor when it concurs with other issues such as heavy workload and stressful work environment. P#6, an experienced head-teacher, narrated how ECE teachers work very hard and that they are expected to fulfil many duties, and yet they are underpaid. The low salary was also raised by participants who perform roles of qualified ECE teachers even though they are unqualified. They perceived their salary to be incommensurate with the work that they contribute to the childcare centre. The incommensurate salary magnifies their feeling of being overworked. Hence, even though the low salary is not a major turnover factor for participants, it still contributes to their decision to leave the childcare centre.

### 4.2. Factors that increase the motivation of ECE teachers to stay in their childcare centre

This section presents the factors that increase the retention rate of ECE teachers. Thirty different strategies emerged from the semi-structured interview data. The 30 codes were categorised into seven themes, and four themes were determined to be the most significant because they accounted for the highest frequency of citation by the participants (Figure 2).

Figure 2 – Significant retention factors based on the frequency of participants' responses
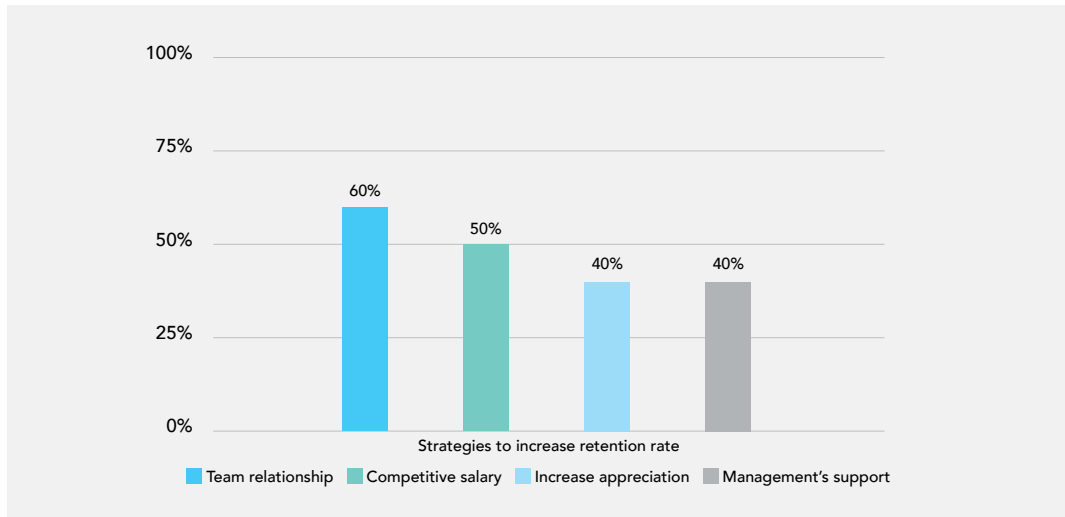


### 4.2.1 Effective relationship with co-workers

Sixty percent of participants view a healthy relationship with co-workers as a vital factor for them to remain in a childcare centre. Since ECE teachers in the ECE sector work in teams, the quality of their relationships with their co-workers play a crucial role in their motivation to work. Participants explained that they prefer working for a childcare centre where they can enjoy the quality of work because they have good relationships with their co-workers. P#9 shared during the interview:

> "I think I don't find it high-stress myself (the job of an ECE teacher). And I have a good relationship with teachers and students. I'm happy at the moment. I don't have any problems."

In addition, when participants are asked if they are happy in their current childcare centres, one of the first reasons for their happiness was they have good relationships with their co-workers. P#7 said the reason for continuing with the current childcare centre is that they love the people whom they work with. Furthermore, participants perceived good communication and social interaction with co-workers as important elements in building good relationships. P#5 suggested that management must provide more avenues for ECE teachers to spend time getting to know each other outside the confines of work. Participants valued management's initiative to promote a positive working environment for them and their co-workers.

### 4.2.2 Competitive salary

The second factor to increase the retention rate was the salary level of ECE teachers. Half of the participants perceived salary as a significant factor in making them stay in their childcare centre. Three participants shared that they experienced management offering them a higher salary to convince them to stay. A salary increment convinced P#3 to stay. However, using salary as financial leverage is not always effective according to two of the participants, who stated that their physical and emotional well-being was more important than a salary increase. Offering a higher salary as a strategy to make the participants stay was a topic divided into two schools of thought. While some participants s may feel salary is enough to change their decision to leave, others felt that monetary reward was not sufficient in changing their decision to leave. These participants think their job satisfaction is based more on a healthy work environment and not on their salary level.

### 4.2.3 Increase value for ECE teachers

The third strategy to increase the retention rate was increasing the appreciation and value for ECE teachers. Participants perceived value as something not only expressed in tangible means like salary. According to four participants, when they feel that their work is being appreciated, they feel more motivated to stay. A childcare centre with an open feedback loop and regular giving of compliments and recognition adds to the participants' feeling of worthiness, eventually increasing their professional status as ECE teachers. P#3 shared practical steps on how management could keep their ECE teachers longer:

> *"Lots of compliments. When you do a good job or to recognise that you've done something giving you compliments or to create a record chart so and so have done a good job and parents have compliments and parents to recommend, they like or dislike or how to improve."*

P#7 shared another practical recommendation for increasing appreciation for ECE teachers. If management has given them autonomy in making decisions about how to communicate with parents. This made them feel that they were being valued and trusted. Overall, participants shared that the feeling of recognition and value should be addressed by the management of the childcare centre. Once these strategies are in place, management adds to their employee's motivation to stay with the childcare centre.

### 4.2.4 Support from management

The fourth strategy to increase the retention rate was management's support to their ECE teachers. Participants shared two distinct ways in how management can improve their support to their ECE teachers.

### *4.2.4.1 Follow through with policies and agreements*

First, management can support their ECE teachers by implementing the policies of the childcare centre effectively and by fulfilling their promises. Promises are not limited to promises made with the ECE teachers like an annual salary increase, it also pertains to enforcing the policies, whether established by the childcare

centre or practising professional work ethics like dealing with bullying in the workplace. P#6 shared the experience of being bullied by other ECE teachers and how management acted indifferently.

> *"I think that they could have really dealt with the bullying and supporting me and taking action against the bullying and that there were consequences for it"*

Management's withholding their support when a participant was being bullied resulted in their leaving the childcare centre. Interlinked with implementing policies is taking action, swiftly. P#3 shared that they felt supported at work whenever they see management resolving issues within the childcare centre with urgency. ECE teachers feel that management is supportive when they can trust that management will follow through with their words and effectively implement policies in the childcare centre.

### 4.2.4.2 Assigning an in-house manager

Management can support their ECE teachers by appointing an in-house childcare centre manager whose role is to oversee the operations of the childcare centre daily. P#10, an experienced team leader, shared how the presence of a childcare centre manager made a big difference in the workload for the team leaders. According to this participant, a childcare centre manager makes the communication between team leaders and managers faster and more efficient, making seeking advice and decision-making more effective.

Therefore, the findings of this research show that the amount and scope of support that management in childcare centres provides to their ECE teachers have a significant impact on their motivation to stay longer in their childcare centre.

## 5. DISCUSSION

This section discusses the findings of this research project. The factors that drive ECE teachers to leave their childcare centres are outlined and analysed with the support of relevant literature. The main factors that cause ECE teachers to leave, discussed in this section, are challenges related to management, relational issues, heavy workload and salary levels.

### 5.1 Management-related challenges

One of the key findings of this research is that management has control over the quality of the work environment of their ECE teachers. They can promote a positive work atmosphere by treating their ECE teachers with respect and equality, which can boost their self-morale. Also, evoking strong leadership roles through the implementation of policies within the childcare centre creates a unified direction for the ECE teachers. This research found that management-related challenges, which are characterised by the inefficient implementation of policies and human resource management, were a key turnover factor of ECE teachers.

The findings of this research are new in terms of identifying management specifically as a factor for staff turnover. However, when the effect of poor management is considered, findings are consistent with the existing research of Wells (2015), whose study indicated that organisations with poor management create a bad working environment. Previous studies have shown that one of the reasons why ECE teachers leave their childcare centre is because of the negative work environment (Wells, 2015; Jones et al., 2017). The prior research of Raziq and Maulabakhsh (2015) is consistent with the findings in this research, which links management with the self-morale of ECE teachers. Also, this research indicated management was a major contributor to producing a healthy work environment (Jones et al., 2017; Raziq & Maulabakhsh, 2015; Wells, 2015), indicating that ECE teachers will end up leaving one childcare centre and moving to another. Since management-related challenges were found to be the most significant factor of turnover in this research, further research to validate this finding is warranted.

## 5.2 Relational issues

Since the work of ECE teachers is team-oriented, their relationship with co-workers is a major factor in their decision to leave their childcare centre. Negative relationships become a turnover factor when they begin to affect the ECE teachers' well-being and work environment. ECE teachers who face irreparable issues with co-workers or their managers are faced with the decision to leave their childcare centre. It was apparent that the job satisfaction of ECE teachers significantly depends on the quality of relationships they share with co-workers and managers.

The findings in this research are consistent with the prior literature of Wells (2015) who determined that one of the factors that drive ECE teachers to leave their childcare centre is the quality of the ECE teacher's relationship with their manager. This research found that teachers' relationship with both their co-workers and managers plays a significant role in their motivation to stay at their childcare centre. When ECE teachers have a good relationship with their co-workers, they are more likely to stay longer with their childcare centre; ECE teachers who had a strong and positive relationship with their co-workers were more satisfied with their jobs (Jones et al., 2017). Research Publications suggest that employees who have positive job satisfaction are less likely to leave their childcare centre (Boxall et al., 2003; Jones et al., 2017). Therefore, the quality of relationships that ECE teachers have with their co-workers has a significant influence on their motivation to leave or stay longer at their childcare centre. Also, it was apparent in this research that ECE teachers look to their managers when relational issues arise. Management's support and effective decision-making skills in resolving conflicts among co-workers influence the ECE teacher's job satisfaction.

## 5.3 Heavy workload

This research found that ECE teachers considered workload as a significant factor in their decision to leave their childcare centre. The workload was a common factor among ECE teachers as the job is physically and emotionally demanding. The job becomes overwhelming when the teacher-to-child ratio is high. Although childcare centres are required to follow a prescribed teacher-to-child ratio, the issue exists when management fails to retain sufficient manpower. Extra ECE teachers were deemed by the participants of this research as a valuable source of help, especially in terms of covering lunch breaks and enabling non-contact times for full-time ECE teachers. Participants left their childcare centres because they had experienced a repeated pattern of heavy workloads, which eventually affected their well-being. The decision to leave a childcare centre becomes stronger when the ECE teachers feel that their salary is incommensurate with the load of their work.

These findings are consistent with the prior research conducted by Ullrich et al. (2017), Wells (2015) and Jovanovic (2013), whose studies show that ECE teachers have a higher probability of leaving their childcare centre because of the workload. This research found that management plays a significant contribution to the heavy workload of ECE teachers. Findings correlating heavy workload with management are consistent with Wells' (2015) research, which highlighted the lack of support from management has a negative effect on the workload of ECE teachers. Since the ECE teachers do not have any control over the number of the available ECE teachers nor the children who come in every day to the childcare centre, they are forced to cope with the amount of work assigned to them regardless of the sufficiency of the workforce. When this happens, the quality of care decreases and the stress on ECE teachers increases, which eventually causes the teachers to leave their childcare centre (Bretherton, 2010).

Bretherton (2010) supports the rationale of ECE teachers being unable to carry out their services to the children to a quality standard when the teacher-to-child ratio is too high. Although ratios have been strictly mandated by the government for all ECE services, the paramount principle behind every ratio must be the assurance that teachers can foster quality and personal connection with each child (Ministry of Education, 2020). In childcare centres with high teacher-to-child ratios, ECE teachers are forced to spread themselves

out too thinly, which causes them to burn out and become overtired at work, impacting their personal life. This is a common factor that has been evident in this research leasing to ECE teachers leaving their childcare centre.

## 5.4 Salary level

The findings that low salary level is a contributing factor to turnover are aligned with the research of Jovanovic (2013), who argued that the salary of ECE teachers is significantly lower compared with the average salary of workers in Australia. Ullrich et al. (2017) argue that the salary of ECE teachers must be at par with teachers in the kindergarten sector. A proposal called "pay parity" has long been yearned for by ECE teachers in New Zealand (May 2017), which Mitchell et al. (2019) suggest, will resolve the present issues of low salary and work condition differences between ECE teachers and kindergarten teachers. The salary level and workload were two factors that were correlated in this research; showing that ECE teachers who leave their childcare centre because of workload were also dissatisfied with their salary.

An accumulation of the aforementioned turnover factors may result in a high probability of future ECE teachers' childcare centre turnover rate. The findings of this research show that the participants provided an average of seven reasons why they left their childcare centre. These findings match the study of Wells (2015), who stated that the ECE teachers who leave their childcare centres are the ones who have experienced an accumulation of factors why they want to leave. This means the decision to leave a childcare centre is not an event that happens over a short period, instead, it is a build-up of negative experiences, one after another. This was evident based on the data that emerged from the semi-structured interviews.

## 6. RECOMMENDATIONS

The second research question discovered specific factors that motivate ECE teachers to stay with their childcare centres based on the strategies identified by the participants interviewed. The results of this research are the foundation of these recommendations.

This section presents specific and action-oriented recommendations which aim to improve the retention rate of ECE teachers in childcare centres. These recommendations all pertain to management since voluntary turnover has long been identified to be an issue for management (Lee & Mitchell, 1994). The order of these recommendations is hierarchical, and the objective of these recommendations is for ECE teachers to foster healthy relationships with management and co-workers in their childcare centre.

It is recommended that childcare centres be intentional in creating a positive working atmosphere so ECE teachers will be attracted to stay (Wells, 2015). One practical way of applying this is by providing opportunities for ECE teachers to develop healthy relationships with their co-workers. The location is ideally outside the workplace, a neutral and stress-free environment, to encourage a relaxed atmosphere of openness among ECE teachers and their co-workers (Peragine, 2017). This may be achieved by organising casual drinks or annual team-building activities. Team building is a powerful way to build teamwork and camaraderie with one another in a fun way. According to Lacerenza et al. (2018), team building provides avenues where interpersonal relationships of co-workers and role clarification can be improved. Two areas that ECE teachers need since their work involves highly team-oriented tasks. The avenues to foster teamwork must be initiated by management and they must encourage their ECE teachers to participate. A possible outcome of this practice is a robust team culture within the childcare centre and encouraging ECE teachers to stay at their childcare centre.

The following recommendations are targeted to increase the value of ECE teachers in childcare centres.

## 6.1 Tangible Incentives: offer a competitive salary

A significant recommendation for childcare centres to improve the retention rate is to increase the salaries that they allocate to their ECE teachers. According to Lai (2009), employees whose salary is contingent on

their work performance become more competitive in their jobs. It is recommended that childcare centres offer opportunities for incremental salary growth on an annual basis and based on performance evaluation. De Ree et al. (2017) discussed how salary increases lessened teachers' stress and increased their satisfaction. De Ree stated any salary increase must be accounted for in the budget allotment for the ECE teachers and not be dependent on the profit of the childcare centre. Upon hiring ECE teachers, management must offer a competitive salary as part of their recruitment, the years of experience and qualifications should be considered in the decision.

## 6.2 Intangible Incentives: verbal praise

An ECE teacher's work is demanding (Mitchell et al., 2019). Hence, verbal recognition is recommended. Increasing the frequency of giving personalised and sincere compliments to ECE teachers for their performance goes a long way in motivating them. According to Andersen et al. (2018), compliments are effective tools for motivating employees. Managers may put this into practise by giving positive feedback and compliments to ECE teachers or putting up an "Appreciation Board" in the staffroom where others can also write compliments or messages for other ECE teachers. Boosting the morale of ECE teachers by consistently acknowledging them may boost their motivation to stay in the childcare centre.

## 6.3 Increase the level of support of management

To increase the retention rate in childcare centres, it is recommended for management to be supportive of their ECE teachers, this can be achieved through three specific actions. First, the childcare centre must apply manageable teacher-to-child ratios, which are better than the minimum required. Examples of the recommended ratios are the 1:3 teacher-to-child ratio for under one-year-olds and the 1:4 teacher-to-child ratio for under two-year-olds. When ECE teachers call in sick, management must call relievers to step in for the day to ensure the teacher-to-child ratios are maintained. Second, management must allocate a budget to hire an in-house childcare centre manager who can oversee the overall operations of the childcare centre. Third, childcare centre managers must create an atmosphere where comments and suggestions from head teachers and ECE teachers are welcomed. The complaints which need swift resolution must be settled in no longer than a week. Applying these recommendations may produce a more valued ECE teacher, who in turn, will be loyal to their childcare centres and stay.

For future studies, it is recommended to conduct a focus group discussion with six to eight participants to validate the usefulness of the semi-structured interview questions (Gray, 2019). In order to get a holistic understanding of the ECE teacher's behaviour in leaving their childcare centres, a study on both non-work-related, and work-related turnover factors may be included in future research. This means future studies must consider the factors of turnover identified in this research and to a broader extent, including both personal and professional reasons for leaving ECE teachers leaving their childcare centres.

## 7. CONCLUSION

The subject of teacher turnover is a serious issue that the New Zealand educational sector is presently facing. In New Zealand, this issue is more related to ECE teachers. Thus, this research focused on the turnover factors of ECE teachers in Auckland, New Zealand. The aims of this research were: (1) to identify the common reasons why ECE teachers leave their childcare centres and (2) to determine what factors motivate ECE teachers to stay in their childcare centres.

Since the nature of the research aimed to understand the motivations of ECE teachers' decisions to leave or stay in their childcare centre, this research followed a naturalistic inquiry approach. This approach is rooted in gathering qualitative data and is why semi-structured telephone interviews were conducted with ten ECE teacher participants who had a history of leaving their childcare centre and were invited through convenience sampling. To determine the common factors of turnover and retention, a thematic analysis was applied to the semi-structured interview data.

This research determined the four most predominant factors why ECE teachers in the childcare centres in Auckland leave their childcare centres (a) failure of management to carry out their roles effectively; (b) allocation of resources; (c) implementation of policies; and (d) effective human resource management. These factors led to ECE teachers' low motivation to work and diminished self-morale. Additionally, these issues increase turnover factors since ECE teachers relate the satisfaction of their work with their professional relationships. The heavy workload and low salaries were interlinked and directs the motivation of an ECE teacher to leave the childcare centre. This means if an ECE teacher is underpaid and overworked, the more likely the ECE teacher will leave the childcare centre.

To satisfy the second research question, four solution-based strategies were identified to increase the retention rate of ECE teachers. These strategies were also considered as recommendations. It is recommended that management (1) increase their support to their ECE teachers by maintaining a manageable teacher-to-child ratio; (2) instil a healthy team culture; (3) offer a commensurate salary level; and (4) increase the level of appreciation for ECE teachers. The recommendations being directed at childcare centre management illustrate how they play a crucial role in minimising the turnover rate of their ECE teachers.

Under these circumstances, management must take their leadership roles more seriously to minimise work-related factors that trigger the voluntary leaving of their ECE teachers from their childcare centre. Enacting their leadership roles efficiently plays a crucial role in maintaining a high quality of ECE services since the managers may instil one of the key indicators of quality in their respective childcare centres, which could lead to low staff turnover.

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# A CONCEPTUAL EVALUATION OF HEALTHY EATING AND PHYSICAL ACTIVITY FOR OFFICE WORKERS APPLYING THE SOCIO-ECOLOGICAL MODEL

Prasadie Rashmini Manawaduge Silva, Indrapriya Kularatne, Edwin Rajah and Olufemi Muibi Omisakin

## ABSTRACT

Healthy eating and regular physical activities are considered important factors to control obesity as well as non-communicable diseases such as type 2 diabetes, coronary heart disease, and several cancers. The obesity rate in New Zealand was 34.3% in 2021 and a sharp increase has been observed in 1977 (Ministry of Health, 2021). This literature review is based on secondary sources to evaluate the existing facilitators and barriers of healthy eating and physical activity for office-based workers in the workplace in New Zealand. The Socio-ecological model is used as the conceptual framework to examine the implications. The outcomes of this study can be used to develop suggestions and recommendations for health and wellness improvements for office-based workers. As an outcome, the work environment and culture have a significant influence on the healthy eating and physical activity of office-based workers in the workplace.

Keywords: office-based workers, healthy eating, physical activity, occupational wellbeing

## INTRODUCTION

The World Health Organization (WHO) (2011) states that healthy eating and regular physical activities are important in preventing obesity, and major non-communicable diseases such as type 2 diabetes, coronary heart disease, and several cancers. The Food and Agricultural Organisation (FAO) and WHO (2019) reported that in 2016, approximately 1.9 billion adults in the world population were overweight and of that 650 million were obese. Obesity is estimated to cost countries around 0.8% to 2.4% of their gross domestic product (GDP) every year. This economic cost is estimated to increase to 3.7% of GDPs in 2060 (Okunogbe et al., 2021). Obesity also imposes indirect costs on the economy in the form of absenteeism (lost workdays due to illnesses), presenteeism (reduced productivity at work), disabilities, and unemployment (Peñalvo et al., 2021).

The Ministry of Health (MOH) (2021) reported the adult obesity rate in New Zealand was 34.3% in 2020 and 2021, and it has been gradually increasing since 1977. The underlying factors for obesity are the consumption of nutrient-poor foods and lack of physical activity (MOH, 2015). Obesity and related cardiovascular diseases are now key risk factors contributing to morbidity, and premature death in New Zealand (MOH, 2015). Of the total public healthcare costs in New Zealand, 2.5% are attributable to obesity, costing New Zealand approximately $135 million per year (Swinburn et al., 1997). According to Burniston et al. (2012) more than 80% to 90% of these obesity and related cardiovascular diseases, and their associated burdens on the global healthcare system, could be avoided or minimised by promoting healthy eating and physical activity among the population.

Many previous studies have identified that the workplace is an ideal setting for promoting healthy eating and physical activity as a substantial proportion of adults spend a significant amount of their waking time every day in the workplace (Allan et al., 2017; WHO, 2011). Workplaces can encourage and support their workers to follow healthy lifestyle behaviours by providing a supportive physical and social environment (Pridgeon & Whitehead, 2013). Besides improved health and well-being, workplace health promotion interventions benefit organisations through increased productivity, increased employee satisfaction and loyalty, improved performance, and reduced absenteeism and healthcare costs (Baicker et al., 2010; Okunogbe et al., 2021). To develop a successful workplace health and well-being programme, managers should first identify the barriers facilitators that their workers face in terms of healthy eating and physical activity in the workplace (Leung et al., 2018). Even though many workplace health programmes have shown a significant positive impact on the healthy eating and physical activity of workers, some health promotion programmes show a moderate to low impact. (Steyn et al., 2009; Torquati, 2016). This demonstrates the significance of understanding the workers' perception of healthy eating and physical activity, their perceived barriers or facilitators of healthy eating and physical activity in the workplace, and their preferences for future health promotion initiatives when planning and implementing health promotion programmes in the workplace.

This literature review is an evaluation adopting secondary sources of information. The aim is to evaluate the existing facilitators and barriers to healthy eating and physical activity for office-based workers in the workplace in New Zealand. The findings from the literature review provide the platform to develop suggestions on health and wellness initiatives for office-based workers in New Zealand.

## LITERATURE REVIEW

The literature review discusses the current research relating to healthy eating and physical activity in the workplace, with a specific focus on office-based workers.

### Healthy Eating

While there are different nuances to the concept of healthy eating, there is agreement that it is aimed at improving people's overall health and well-being (Reddy & Anitha, 2015). A healthy diet is comprised of vegetables and fruit, whole grains, lean meats, dairy products, nuts, and minimal consumption of salt, trans-fat, red meat, refined carbohydrates, and sugar (Pallazola et al., 2019). Unhealthy eating is the main contributing factor to many non-communicable diseases such as diabetes, dyslipidaemia, cancers, and hypertension (Li et al., 2015).

*Healthy Eating in New Zealand*

An estimated 34.3% of adults aged 15 years and over in New Zealand are obese, and a further 39.2% of adults are overweight (MOH, 2021). Additionally, the obesity rate of adults in New Zealand living in the most disadvantaged areas is two times higher than the obesity rate of adults living in less disadvantaged areas (MOH, 2021). New Zealand adults' dietary fibre intake is lower than the recommended intake of 20grams (g) per day, and this is one of the major risk factors in the development of non-communicable diseases among the New Zealand population (MOH, 2020). The MOH (2020) recommends two servings of legumes, poultry, seafood, nuts, or fat removed from red meat per day for a healthy adult. According to Wild et al. (2020), the main barriers to healthy eating for New Zealand families are the cost of healthy foods, time constraints, and a negative food environment. The average cost of a healthy diet was NZ$27 more expensive than the cost of a current unhealthy diet in New Zealand (Vandevijvere et al., 2018). It was also suggested that reduced taxes on fruit and vegetables could reduce the average cost of healthy diets and make it easier and more affordable for people to consume a healthy diet in New Zealand (Vandevijvere et al., 2018).

### Healthy Eating in the Workplace

The workplace has been recognised as an ideal place to promote healthy eating by creating a positive

physical and social environment and conditions that support healthy eating among the workers (Lassen at el., 2010). Many workplaces facilitate unhealthy eating by offering an abundance of sweet, low-nutritional foods and unhealthy snacks through vending machines (Grant, 2018; Wansink et al., 2006). Many studies found that work-related stress and job exhaustion/burnout are positively correlated with unhealthy, fast-food consumption by workers (Alexandrova-Karamanova et al., 2016; Chui et al., 2020; Leung et al., 2018).

## Physical Activity

Lack of physical activity is estimated to cause approximately 5.3 million deaths annually worldwide and is equivalent to smoking and obesity in terms of health risks (O'Brien, 2018). Physical activity can be defined as any bodily movement produced by skeletal muscles which requires energy expenditure (WHO, 2018). Walking, cycling and different recreational activities are also considered physical activities (Knox et al., 2015). Office-based workers spend most of their time sitting and the lack of physical activity is correlated with obesity, and several cardiovascular diseases (Arundell et al., 2018; Gelius et al., 2020). It is widely agreed that regular movement throughout the day and breaking up sedentary time support improved health outcomes (Hartshorn, 2009; Holzgreve et al., 2021 ).

### Physical Activity in New Zealand

Lack of physical activity is the fourth leading risk factor for noncommunicable diseases in New Zealand (MOH, 2020).  According to recent survey data, the level of physical activity of New Zealanders has been declining at a rate of around 1% per year since 1990, and currently, more than a third of New Zealanders can be categorised as physically inactive (MOH, 2021). One measure of physical activity comes from the New Zealand Health Surveys 2018/19, which showed that 51% of New Zealand adults were involved in a minimum of 30 minutes of moderate-intensity activity over the week (MOH, 2021).

## Physical Activity in the Workplace

Due to the changes in technology and economic development, physical activity of many occupations has decreased significantly over the years and a high proportion of the workforce is now engaged in inactive and sedentary jobs (Hadgraft et al., 2016). In New Zealand, 57% of adult workers were categorised as being low-active in the workplace (Schofield et al., 2005). While in Australia, 75% of workers' days were categorised as sedentary (Thorp et al., 2012).  For office-based workers, the majority (71% of working hours) of their workday is sedentary with minimal time (28% of working hours) is spent on light-intensity activities (Clemes et al., 2014). Workplace activity varies depending on the occupation; office-based occupations are not as active as other occupations and involve more sedentary work (Osilla et al., 2012).

The sedentary work environment has negative impact on health such as; increasing obesity, hypertension, and impaired blood lipids that are associated with cardiovascular diseases (Grundy et al., 1999; Ojo et al., 2019). In New Zealand alone, approximately NZ$160 million of health-related costs could be saved annually if the recommended physical activity guidelines were followed by the adult population (O'Brien, 2018). Not only the economy, but workplaces also experience the impact from a lack of physical activity and sedentary behaviour of workers which impacts the workplace through decreased productivity, increase medical claims, higher worker turnover rates, and increased absenteeism, all of which contribute significantly to increasing the finance cost of the workplace (Styles, 2011).

## Barriers and Facilitators to Healthy Eating and Physical Activity in the Workplace

This literature review applied the socio-ecological model (McLeroy et al., 1988) as the conceptual framework to examine the barriers and facilitators to healthy eating and physical activity in the workplace (Figure 1). It incorporates multiple factors (individual, organisational, social, and policy) into different levels of influence over human behaviour (Kasteren et al., 2020; Stern et al., 2021).

Figure 1 – Socio-ecological Model for Healthy Eating and Physical Activity
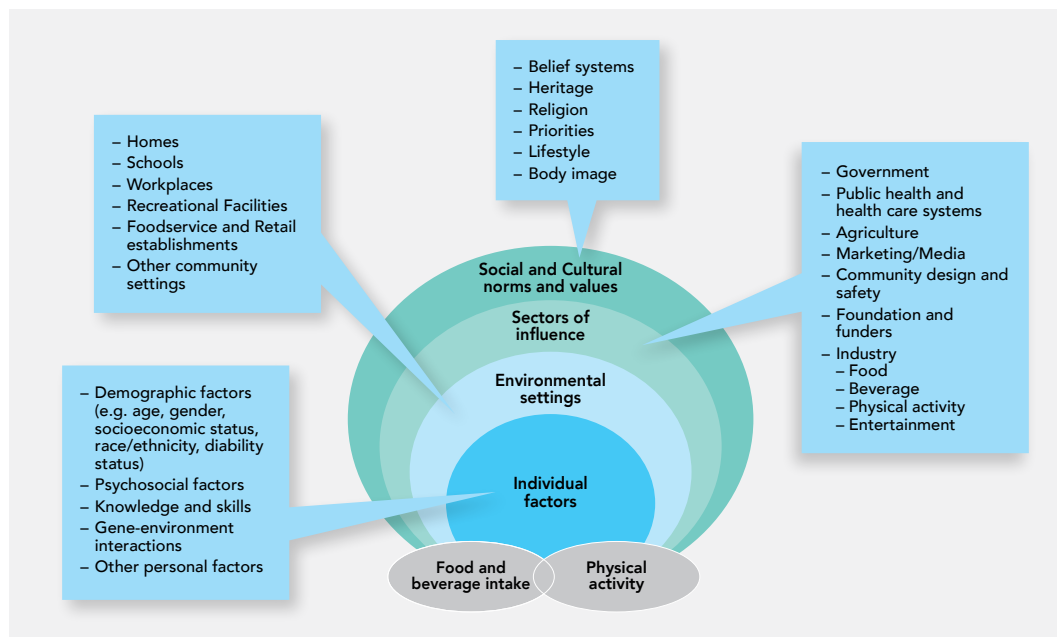


Note: The socio-ecological Model shows the individual, social, organisational, and policy level influences on healthy eating and physical activity of an individual. Source: United States Department of Agriculture and United States Department of Health and Human Services (2010).

The existing literature agrees that the organisational structures, systems, and culture of a workplace have a significant influence on the healthy eating of workers (Almeida et al., 2015; Brambila-Macias et al., 2011; Lima et al., 2021; Stern et al., 2021). Many previous studies found several organisational facilitators that facilitate healthy eating in the workplace such as the availability of healthy food options in the workplace or nearby, the availability of kitchen appliances to prepare food and store it properly, workplace cafeteria with appealing and cost-effective healthy food options, lower numbers of vending machines and nutritional education (Backman, 2011; Tamrakar et al., 2020).

*The social and cultural context of Healthy Eating in the Workplace*

Healthy eating is highly correlated with the social environment since eating is a social activity (Lassen et al., 2010). In the workplace, workers' healthy eating is highly influenced by their co-workers and their managers (Alqahtani, 2020; Reddy & Anitha, 2015). Additionally, family structure, support from their partner, and the presence of children also influence workers' healthy eating in the workplace (Power et al., 2017). Interestingly, Alqahtani (2020) discovered that group eating was more popular among women, and they had a higher chance of being influenced by their co-workers. Moreover, Tabak et al. (2015) showed that the fruit and vegetable consumption of co-workers was identified as a facilitator for eating more fruit and vegetables by most workers.

Culture also has a significant influence on eating practices as for most people food is the main part of their culture (Geaney et al., 2015; Verra et al., 2019). Culture consists of different values, customs, and habits of individuals acquired throughout their life (Geaney et al., 2015; Reddy & Anitha, 2015). According to Lima et al. (2021) highly educated and professional workers" food choices were mainly determined by their cultures

such as their religious beliefs and political ideologies, while among the lower-qualified workers, their culture and beliefs had a reduced impact on their healthy eating.

*Individual Perspectives on Healthy Eating in the Workplace*

At an individual level, healthy eating is determined by the personal characteristics of the individual including their age, gender, education level, health status, culture, income status, nutritional knowledge, cooking skills, and personal preference (Blackford et al., 2013). According to Mumme et al. (2020), education level and individual income are frequently associated with healthy eating. A recent study conducted in New Zealand showed a significant correlation between the healthy eating of individuals and their socio-demographic factors (Beck, et al., 2018).

Taste is another important determinant of eating since humans show an inherited taste preference for sweet and salty foods, while some people assume that healthy diets are not palatable (Lappalainen et al., 1997). A recent study in Mexico showed that most workers did not consume healthy food in the workplace due to the unappealing and unpleasant taste of the healthy food options available in the cafeteria (Stern et al., 2021). Also, the unhealthy foods available in the cafeteria, such as fast/fried food tasted and looked better than the healthy foods (Stern et al., 2021).

*Impact of Government Policies on Healthy Eating in the Workplace*

Government policies and regulations play a major role in facilitating physical activity among workers (Gelius et al., 2020). National physical activity guidelines as well as advocacy documents and different international agreements such as the Ottawa Charter also highlight the importance of government interventions for facilitating physical activity in the workplace (Gelius et al., 2020; WHO, 1986; Williden et al., 2012). Governments can introduce physical activity policies, agendas, structures, and funding to develop, implement and finance projects to increase the physical activity of the population (Gelius et al., 2020). Government policies like transport policies, urban design, and transport taxes can have a great influence on the physical activity of the working population (Ablah et al., 2019). Barton (2009) confirmed that the quality of public transportation, town planning, accessibility to local facilities, and housing patterns strongly facilitate the walking, cycling, and outdoor recreational activity of the population. Additionally, sidewalk quality, improving lighting, connectivity, street design, separate cycling lanes from other traffic, presence of dedicated walking and cycle routes, and closeness of cycle paths to workplaces have a strong correlation connection with the physical activity profile of the working population (Fraser & Lock, 2011; Gelius et al., 2020).

At the population level, policies created by the government can impact on healthy eating in the workplace (Almeida et al., 2015). Policy interventions fall into two categories: the first is, policies to support informed choices of the population and the second is policies to support changing the market environment (Brambila-Macias et al., 2011). Restrictions on unhealthy food marketing/advertisements, increasing education, and awareness of unhealthy eating and its' consequences, nutritional labelling, and information on food packaging and menus are some of the policies used to support informed healthy eating choices in the working population (Brambila-Macias et al., 2011; Mozaffarian, 2018). On the other hand, fiscal policies can be used to promote healthy eating among the population such as increasing the tax on unhealthy foods, decreasing the tax on healthy foods, providing incentives to healthy food manufacturers, and introducing quality standards (Mozaffarian, 2018).

*Workplace Environment and Physical Activity in the Workplace*

The workplace's physical environment and organisational structure have a significant impact on the physical activity of workers (Aittasalo et al., 2017). Many studies have identified factors associated with office-based workers' physical activity and sedentary behaviour in the workplace (Aittasalo et al., 2017; Grimani et al., 2019; Hadgraft et al., 2016; Nooijen et al., 2018). The major barriers that have been identified are workload, lack of time, work pressure, lack of exercise facilities on-site or near the workplace, lack of cycle parking

facilities, lack of lockers and showers, and lack of management support (Aittasalo et al., 2017; Nooijen et al., 2018). The main facilitators for being physically active in the workplace were the availability of on-site fitness facilities, group exercise classes, physical activity education, recreational activities, organisation-sponsored sports events, corporate challenges and work flexibility (Grimani et al., 2019; Hadgraft et al., 2016; Nooijen et al., 2018). Additionally, some of the recent workplace physical activity initiatives such as walking meetings, height-adjustable desks, treadmill desks, activity-based working, and open-plan offices have shown promising results in increasing the physical activity of workers while reducing workplace sitting time (Hadgraft et al., 2016).

*Social Environment and Physical Activity in the Workplace*

The social environment is an important determinant of the physical activity of office-based workers. The main social factors facilitating the physical activity level of workers are co-workers, family, and friends, and the management in the workplace (Blackford et al., 2013; Houle et al., 2017). A study of 671 male adults in Canada showed that friends and co-workers play a significant role in promoting the physical activities of men (Houle et al., 2017). They suggested that peer encouragement, being a good role model and, practical support from co-workers could help men to increase their physical activity in the workplace (Houle et al., 2017). Similarly, a study by Rowland et al. (2018) discovered that peer modelling intervention is an effective and feasible method of changing the physical activity of inactive women in the workplace. Additionally, it was found that the adults who had positive social connections and networks within their organisations were more physically active than the other workers (Pringle et al., 2013; Rowland et al., 2018).

Family responsibilities and parenthood were recognised as major barriers to physical activity in the workplace (McIntyre & Rhodes, 2009). Lack of time, lack of energy, feeling guilty and busyness due to family commitments were identified by many workers as the main reasons for being inactive in the workplace (Mailey et al., 2014). Whereas workplace physical activity initiatives were significantly beneficial to working mothers due to their limited time and family commitments (Mailey et al., 2014).

*Individual Factors and Physical Activity in the Workplace*

A few individual factors have been identified as barriers to being physically active in the workplace such as lack of time, lack of energy, lack of self-motivation, low self-efficacy, inconvenience of being physically active, and lack of knowledge (Blackford et al., 2013; Hadgraft et al., 2016; Ojo et al., 2019; Quintiliani et al., 2007).

A quantitative study of 992 working adults in England found that knowledge of moderate to vigorous physical activity recommendations was significantly low in the workplace (Knox et al., 2015). Knowledge and awareness of physical activity have been identified as a prerequisite to engaging in more physical activity in the workplace (Hadgraft et al., 2016; Knox et al., 2015; Ojo et al., 2019). Workers' motivation to increase physical activity in the workplace could be increased through emails, frequent messages on their computer screens, frequent reminders to interrupt prolonged sitting time, health seminars, and counselling sessions (Hadgraft et al., 2016; Parry & Straker, 2013).

The literature review covered both the importance of healthy eating and physical activity, plus barriers and facilitators for healthy eating and physical activity in the workplace in office-based workers. However, the evidence regarding studies of healthy eating and physical activity of office-based workers in New Zealand was very limited. Even though there is a clear correlation between poor nutrition and an inactive lifestyle with mortality and increased chronic disease risk, little is known about the healthy eating and physical activity of office-based workers in New Zealand. Additionally, office-based workers' perspectives about healthy eating and physical activity and their preference for future health promotion initiatives have not been assessed in New Zealand workplaces. Therefore, this literature review aimed to explore the barriers and facilitators to healthy eating and physical activity of office-based workers in New Zealand and to use the findings to recommend a range of health promotion initiatives to improve healthy eating and physical activity in the workplace.

## LIMITATIONS AND GAPS

The level of workplace obesity worldwide is on the rise due to unhealthy eating and lack of physical activity among the working population (Almeida et al., 2015). Therefore, this literature review primarily aims to identify the barriers and facilitators that office-based workers face in terms of healthy eating and physical activity in the workplace. The socio-ecological model was used to describe the contributing factors of these behaviours at the individual, organisational, social, and policy levels (Kasteren et al., 2020).

There has been very limited research carried out regarding the barriers and facilitators of healthy eating and physical activity in the workplace (Lima et al., 2021; Mestral et al., 2016; Nooijen et al., 2018; Tamrakar et al., 2020). In New Zealand, most of this research was based on different community samples such as older single men, male adolescent rugby players, primary school children, and university students (Bowden, 2008; Quintiliani et al., 2010; Stokes, 2017). Also, using the socio-ecological model to analyse barriers and facilitators of healthy eating and physical activity in a workplace setting is an under-researched area in New Zealand (Edwards, 2012). The socio-ecological framework is a highly adaptable theoretical model which is used to analyse distinct human behaviours using interrelated (individual, organisational, social, and policy) factors (Kasteren et al., 2020). Apart from this, literature exploring workers' perception of healthy eating and physical activity in the workplace is limited (Commissaris et al., 2016; Hipp et al., 2015). Moreover, fewer studies have been carried out in terms of both healthy eating and physical activity components together when evaluating the health and well-being of workers (Almeida et al., 2015; Grimani et al., 2019). According to Conn et al. (2009), Steyn et al. (2009) and Torquati (2016) workplace initiatives focussing on both the nutrition and physical activity components together had a significant positive impact on workers' body weight, Body Mass Index (BMI), work attendance, and productivity in the workplace. Therefore, there appears to be a knowledge gap in this area of research as previously identified the combination of these lifestyle components; healthy eating and physical activity, have the potential to improve quality of life and prevent chronic disease in the population (Nooijen et al., 2018; Tamrakar et al., 2020).

Some occupations, especially desk-based jobs require workers to spend long periods seated such as professional services, senior management roles, artistic work, and administration jobs (Lima et al., 2021; Mestral et al., 2016). These workers spend more time sitting than average workers and have double the risk of developing cardiovascular disease compared with those workers who have physically active jobs (Retamal, 2013). However, very little is known about how to improve the health and well-being of office-based workers (Bowden, 2008; Quintiliani et al., 2010). In addition to that, literature exploring workplace healthy eating and physical activity level is limited, with much of the research carried out exploring these taking place over the whole day (inside and outside of the workplace) (Commissaris et al., 2016; Hipp et al., 2015). Thus, it would appear to be significant to undertake research in the New Zealand office-based workplace context to understand healthy eating and physical activity of office-based workers in the workplace to improve their health and health outcomes.

## CONCLUSION

Eating a healthy diet and regular physical activity are considered key elements for the prevention of obesity and several chronic diseases (Li et al., 2015). Since working adults spend more than half of their waking hours in the workplace (Peñalvo et al., 2021), understanding workplace barriers and facilitators to healthy eating and physical activity is essential for the control and prevention of non-communicable diseases among office-based workers. The primary aim of this literature review was to understand the facilitators and barriers that New Zealand office-based workers face in terms of healthy eating and physical activity in the workplace. Understanding the factors associated with healthy eating and physical activity of office-based workers could help to tailor workplace health initiatives and strategies and promote healthy lifestyle behaviours among office-based workers both in and out of the workplace. Also, workplace health promotion initiatives can benefit the organisation through improved productivity, employee satisfaction, and reduced health-related costs (Arundell et al., 2018; Aittasalo et al., 2017; Knox et al., 2015; Styles, 2011).

Overall, the findings of this literature review suggest that the organisational environment and culture have a significant influence on the healthy eating and physical activity of office-based workers in the workplace. To promote healthy eating and physical activity in the workplace, it is recommended that managers should streamline the physical environment in the workplace, by cultivating a positive organisational health climate including; reducing workload, increasing the availability of healthy food options in workplace cafeterias and vending machines, introducing healthy food options at meetings and social events, increasing awareness through emails, screensavers and notice-boards, introducing compulsory breaks for stretching and exercise, longer lunch breaks for walking groups or fitness classes, signs to use the stairs instead of the elevator, organising health challenges and introducing incentive schemes to reward healthy eating and physical activity in the workplace.

However, no matter of nudging can control the choices made by individual office-based workers, the responsibility for healthy eating and physical activities in the workplace always remains with the individual.

Future research is required to determine the barriers and facilitators of healthy eating and physical activity in a wider range of workplaces. To add validity to future research, including a more diverse working population would strengthen the findings.

Finally, methods should be identified to overcome the barriers and support the implementation of successful health initiatives and strategies to improve healthy eating and physical activity of New Zealand office-based workers in the workplace.

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# CROSS-CULTURAL INVESTIGATION: CHALLENGES FACED BY PACIFIC SEASONAL WORKERS DURING THE COVID-19 PANDEMIC

## Chintankumar Patel and Indrapriya Kularatne

## ABSTRACT

The workers under the Recognised Seasonal Employer scheme of New Zealand faced many challenges due to border closures during COVID-19. However, the New Zealand Government and the Recognised Seasonal Employers have shown immense commitment to supporting and motivating Pacific workers through effective communication. This investigation found that local communities have also demonstrated their responsibilities in supporting Pacific seasonal workers. Most of these initiatives and measures align with International Labour Organisation's guidelines and United Nations Sustainable Development Goals. Still, improvement is required for the New Zealand Government in responding to an emergency such as COVID-19 to support Pacific Seasonal Workers. Initiatives such as offering wages higher than living wages are recommended to be competitive in attracting Pacific seasonal workers who are critical in the growth of New Zealand's horticulture and viticulture businesses.

Keywords: Recognised Seasonal Employer (RSE) workers, globalisation theories, cross-culture, COVID-19

## INTRODUCTION

Under the Recognised Seasonal Employer Scheme (RSE) of the New Zealand Government, people from the Pacific region come to New Zealand to seek employment opportunities in the viticulture and horticulture sectors (New Zealand Ministry of Foreign Affairs and Trade (NZMAT), 2022). Pacific countries include Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu (Horticulture New Zealand, 2022). The RSE scheme helps employers from the horticulture and viticulture sectors to meet the labour shortage and provides an opportunity for Pacific workers to learn skills and earn a higher income to support their families and communities back home (Bailey, 2020a). In short, the workers' movement benefits the Pacific region and New Zealand (NZMAT, 2022). Academics, policymakers, the public, and the media paid attention to permanent residence migration in the 1990s, this has changed in the twenty-first century, and the focus has shifted to temporary migration (Friesen, 2018). As a result, the RSE scheme was implemented in 2007 to allow the viticulture and horticulture sectors to hire seasonal workers from Pacific countries in cases of labour shortages (Curtain et al., 2018; Immigration New Zealand, 2022). Figure 1 shows that most Pacific workers approved for a temporary work visa from 2012-13 to 2016-17 are under the RSE scheme (Ministry of Business, Innovation & Employment, 2018). Furthermore, almost 16% of New Zealand's horticulture workforce comes from Pacific seasonal workers (Curtain et al., 2018). This shows the importance of Pacific seasonal workers in developing the viticulture and horticulture sectors of New Zealand.

Figure 1 – Approved temporary workers from the Pacific by work visa category, 2012/13 to 2016/17 (Ministry of Business, Innovation & Employment, 2018)
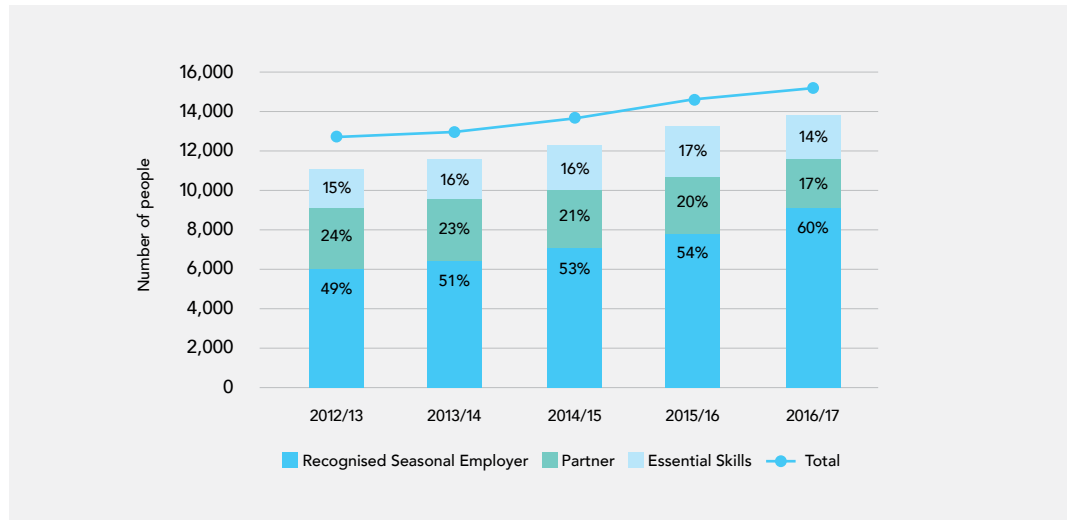


Source: Pacific Migrant Trends and Settlement Outcomes Report (2018)

During the Coronavirus Disease (COVID-19) pandemic, Pacific seasonal workers have faced challenges related to mental and physical exhaustion, sexual health, and pregnancy as the workers needed to stay in New Zealand longer than expected (Bedford, 2021). However, almost all research papers only describe the experiences of RSE workers during COVID-19. New Zealand Government needs to see the issue of Pacific seasonal workers from the cross-cultural management perspective and evaluate the impact of globalisation theories and United Nations Strategic Development Goals (UNSDG) in decision-making. This investigation provides insights into RSE Pacific seasonal workers' behavioural patterns during the COVID-19 pandemic and facilitates future alignment to globalisation theories and UNSDG.

This investigation evaluated the role of the government, managers, the concepts of globalisation, and UNSDG in decision-making for Pacific seasonal workers during COVID-19 in New Zealand. It also identifies the issues raised by the COVID-19 pandemic for employers and the government and evaluates how they responded to the situation regarding International Labour Organisation (ILO) guidelines. Moreover, globalisation theories were used to analyse the RSE Pacific seasonal workers' status during the COVID-19 pandemic. Finally, how New Zealand achieved the UNSDG through effective decision-making for Pacific seasonal workers is discussed.

## METHODOLOGY

This investigation used an exploratory research technique as it is cost-effective and gives flexibility in structuring the research. Secondary data was gathered from online resources. Online search platforms such as Google Scholar and Proquest, available from the Robertson Library (online system), were utilised to find journal articles, newspaper articles, news from government departments, specific research articles, and statistics on the RSE scheme. This was then analysed using the qualitative method of reading through many times, digging deeper into the data to find connections, responses, and behavioural patterns.

The following sections investigate how effectively the communication, motivation, and support dimensions were utilised during the COVID-19 pandemic by the Government of New Zealand, New Zealand employers, community groups and industry groups.

## COMMUNICATION

Communication between the decision-making parties (New Zealand Government and employers) and RSE Pacific seasonal workers was vital during the COVID-19 pandemic (Beattie, 2021). Additionally, the motivation and support provided to RSE Pacific seasonal workers during these difficult times by various groups were appreciated by the global community (Bedford, 2020). Böl (2021), while researching coping with the COVID-19 pandemic in different countries, found that clear communication and political will were critical levers in the fight against the pandemic. In this context, the New Zealand Government's communication regarding the COVID-19 pandemic was praised worldwide (Beattie, 2021). New Zealand's Government developed firm measures, including border closures, quarantine requirements, and social distancing (Böl, 2021). These measures have been communicated logically, clearly, and concisely, primarily through the "1 pm briefing" and social media (Böl, 2021). The daily media briefing of Prime Minister (PM) Jacinda Ardern and Ashley Bloomfield (Director-General of Health) was effective because the communication was consistent and able to develop unity across the nation. This was due to the PM Jacinda Arden leading the population of New Zealand, including Pacific seasonal workers, through the COVID-19 pandemic as "Team New Zealand" (Beattie, 2021). Also, these daily briefings helped the New Zealand Government establish trust within the country through honest and open communication, using motivational phrases in the speech and expressing their duty of care through empathetic and inclusive communications. For example, daily briefings consistently included where to find COVID-19-related information, case numbers, risk of the COVID-19 virus, uncertainties related to the pandemic, essential decisions, use of motivational phrases like "going hard and early", and use of empathetic and inclusive words like "team of five million" (Beattie, 2021).

On the other hand, RSE helped Pacific seasonal workers to understand the information relating to COVID-19 symptoms, hygiene, and social distancing (Bedford, 2020a). As COVID-19 can affect both physical and mental health (Adhanom Ghebreyesus, 2020), it was evident that Pacific seasonal workers would feel anxiety, fear, and sadness because of work uncertainty, separation from their family that they would be in New Zealand for an extended period, and shifting them to new locations and jobs (Bailey, 2020). However, RSE employers have communicated and delivered the material and information on mental health to pacific seasonal workers and encouraged them to seek medical help if they feel unwell (Bailey, 2020b). Furthermore, through media reports, local councils, RSE, and community groups raised concerns for Pacific seasonal workers about work uncertainties and financial hardship (Bedford, 2021). Also, RSE team leaders played a vital role in encouraging Pacific seasonal workers to pay attention to only official information and notices released by the Government to stop the rumours within their communities (Bailey, 2020a).

## MOTIVATION AND SUPPORT

Industry groups, government agencies, and RSE collaborated to support Pacific seasonal workers in their employment during COVID-19 (Bedford, 2020a). During alert level 4, RSE and the Ministry of Primary Industries collaborated to implement health, safety, hygiene, and social distancing measures to keep Pacific seasonal workers in their respective "bubbles" (Bailey, 2020a). The New Zealand Government extended Pacific seasonal workers' visas to give RSE flexibility to move Pacific seasonal workers between crops and regions (Bedford, 2020a). New Zealand Immigration approved many variations of conditions for visa applications for Pacific seasonal workers (Bedford, 2020a). Recognised Seasonal Employers provided Pacific seasonal workers the maximum hours possible by spreading work among their workforce even after the expiration of their original work contract (Bailey, 2020a). However, many RSE expressed their frustration as the New Zealand Government was not quick enough to respond to changing situations (Bedford, 2020a). This resulted in visa processing delays for Pacific seasonal workers during the COVID-19 pandemic and the inability to work in different industry sectors (Bailey, 2020b).

It was difficult for RSE employers and team leaders to keep Pacific seasonal workers motivated as many were coping with the stress related to the uncertainty of when they were going home and boredom

because of low work opportunities (Bailey, 2020a). Increased incidents related to pastoral care, like consumption of alcohol, not complying with rules, and antisocial behaviour, was reported by RSE team leaders within Pacific seasonal workers who did not have enough work and wanted to return to their countries (Bedford, 2020a). However, RSE did more than expected under the RSE policy concerning the pastoral care of their contracted Pacific seasonal workers, such as contributing to the living costs of Pacific seasonal workers (Bailey, 2020b). Moreover, RSE, communities, and government agencies run fundraisers in many regions to support Pacific seasonal workers whose families were affected by a cyclone; the charity Fruit of the Pacific has raised funds to support ni-Vanuatu seasonal workers' families who were affected by "Harold" (the hurricane) (Bedford, 2020a). The government also provided Pacific seasonal workers with reduced hours to develop additional skills and knowledge through the Vakameasina programme, funded by the NZMFAT under the NZ Aid Programme (Vakameasina, 2022).

In conclusion, Pacific seasonal workers faced many challenges due to border closures during the COVID-19 pandemic. While clear communication proved to be an effective tool for informing and educating Pacific seasonal workers about the COVID-19 pandemic, motivating Pacific seasonal workers during the pandemic was a real challenge. However, the government, communities, and RSE supported them as much as possible. The section below evaluates the measures discussed in this section and other decisions made during the COVID-19 pandemic to support Pacific Seasonal Workers concerning theories of globalisation.

## ANALYSING RSE PACIFIC SEASONAL WORKERS' SITUATION USING GLOBALISATION THEORIES

### Appadurai's Theory of Globalisation

Appadurai (1996) has recommended a framework to explore the disjuncture among politics, economy, and culture due to globalisation to consider the relationship between ethnoscapes, technoscapes, ideoscapes, financescapes, and mediascapes of cultural flows in globalisation. Ethnoscapes refer to "the landscapes of people who account for the change in the world: immigrants, seasonal workers, refugees, tourists, exile, and other moving individuals and groups" (Richardson, 2021). These groups and individuals can influence the politics between (and of) nations (Appadurai, 1996). For example, the New Zealand Government allowed Pacific seasonal workers into the country during the COVID-19 pandemic through two border exemptions to support the viticulture and horticulture sectors (Bedford, 2021). These changes in policies related to the immigrant population and the development of different needs due to shifts in the international capital encourage communities to travel to another country (Appadurai, 1996). Also, the movement of communities and people from developing to developed countries promotes economic development in developing countries (Horticulture New Zealand, 2022). For example, the RSE scheme contributed over $40 million to Pacific countries through seasonal worker migration in 2018 (Horticulture New Zealand, 2022). This is why the governments of Pacific countries want their people to work in New Zealand even during the COVID-19 pandemic to reduce unemployment in their countries (Radio New Zealand (RNZ), 2021a).

Appadurai considers "technoscapes as the movement of information and mechanical technology at a very high speed worldwide" (Appadurai, 1996). Appadurai also argues that the technological trend is not driven by market rationality, political influence, or market expansion but because of the complicated relationship between the flow of money (financescapes), political possibilities, and the availability of skilled and unskilled labour (Richardson, 2021). This explains the movement of low-skilled seasonal workers from Pacific countries to New Zealand under the RSE scheme. Moreover, the availability of the internet and social media platforms expanded the social possibilities during the COVID-19 pandemic for Pacific seasonal workers. For example, Pacific seasonal workers mainly used social media platforms to connect with their family and friends during COVID-19 (Bailey, 2020b).

Moreover, technoscapes, "especially the movement of information, are also connected with ideoscapes and mediascapes" (Richardson, 2021). In his theory, Appadurai mentioned television, film studios,

magazines, and newspapers as mediums of information exchange (Appadurai, 1996). He could not have predicted the internet's dominance in the future while writing his thesis. For example, digital media played a vital role during the COVID-19 pandemic, especially in spreading information using visual data, promoting public health through social media campaigns, and using mobile applications to harmonies medicinal resources (Bao et al., 2020). Even Pacific seasonal workers were encouraged by their RSE to use social media platforms and official websites to educate themselves about COVID-19 (Bailey, 2020a).

World System Theory of Immanuel Wallerstein

Wallerstein's world-system theory divided a singular capitalist economy into four categories: core, periphery, semi-periphery, and external (Hopkins, 1982). Wallerstein claimed that core nations have the advantages of having high technology, wages, and profit margin economies with diverse production systems, while peripheral nations have precisely the opposite economies to core nations, but semi-peripheral countries have characteristics of both periphery and core nations (Griffiths & Imre, 2013; Hopkins, 1982; Kampmark et al., 2019). That is why one of the essential characteristics of Wallerstein's world-system theory is that Wallerstein has included a concept of semi-periphery territory, which is a more practical approach than Galtung's binary idea of centre-periphery (Moon, 2015). The practicality of the semi-periphery model can be seen when applied to the relationship between Australia, New Zealand, and Pacific countries. For example, New Zealand has higher wages than Pacific countries (RNZ, 2021) but has lower salaries and a higher cost of living than Australia (Bedford et al., 2021a; Stuff New Zealand, 2022). That is why New Zealand, being semi-periphery to Australia, faced a challenge in attracting Pacific seasonal workers during the COVID-19 pandemic, as more Pacific seasonal workers chose Australia over New Zealand for employment opportunities (Bedford, 2021a).

Through the RSE scheme, New Zealand's horticulture and viticulture sectors benefited from improved productivity and stability (Bedford et al., 2017). On the other side, Pacific countries depended on the RSE scheme for their economic development (Bedford et al., 2017). That is the reason why governments of Pacific countries were keen to send as many workers as possible to New Zealand during COVID-19 to survive the economic difficulties (RNZ, 2021a). Therefore, the New Zealand Government allowed 4,400 Pacific seasonal workers to enter the country through two border exemptions (Bedford, 2021b) to help Pacific countries (peripheral countries) survive the COVID-19 pandemic. This was considered a humanitarian and ethical act by the New Zealand Government as this helped Pacific countries to survive through difficult times.

The following section discusses the ethical practices of the New Zealand Government and RSE to support Pacific seasonal workers concerning the UNSDG and the ILO.

## UNITED NATIONS SUSTAINABILITY DEVELOPMENT GOALS

The United Nations adopted seventeen goals for sustainable development in 2015 (United Nations, 2022a). It provides a plan for prosperity and peace for the planet and people, the present and future (United Nations, 2022b). The New Zealand Government's decision to allow Pacific seasonal workers to come into the country for work during the COVID-19 pandemic through two border exemptions was in line with goal 1 (Bedford, 2021a). This decision also aligns with goal 8 of ensuring decent economic growth and recovery for New Zealand even during the COVID-19 pandemic. Concerns have been raised in the past regarding the earnings of Pacific seasonal workers through their employment under the RSE scheme. (Bedford et al., 2017). However, the New Zealand Government took measures to increase Pacific seasonal workers' compensation from the minimum to the living wage (Bedford, 2021a).

Moreover, Red Cross New Zealand, with the help of the Internal Affairs Department, launched a programme for migrant workers (including Pacific seasonal workers) to support them in covering basic costs like rent, food, and utility bills (Bedford, 2020a). Also, RSE contributed to Pacific seasonal workers' living costs by providing additional hours to cover their essential needs even after the expiration of their contracts during

the COVID-19 pandemic (Bailey, 2020b). These measures were aimed at achieving goal 1 of no poverty. To achieve the goal of zero hunger (goal 2), civil defence and local communities have run fundraisers to provide Pacific seasonal workers with food packages during the COVID-19 pandemic (Bedford, 2020a). Also, RSE helped Pacific seasonal workers shop online since most were unaware of the online shopping practices during the initial COVID-19 lockdowns in New Zealand (Bailey, 2020a). Moreover, banking institutions, community groups, and employers have helped educate Pacific seasonal workers to send money through official institutions to support their families at home (Bailey, 2020b). To maintain the excellent health and well-being (goal 3) of Pacific seasonal workers, RSE have performed beyond their obligations under the employment agreement to provide pastoral care to workers during the COVID-19 pandemic (Bedford, 2020a). Also, Pacific seasonal workers were encouraged to seek medical help and informed about recognising COVID-19-related symptoms and practicing hygiene and social distancing (Bailey, 2020a).

## ROLES OF ILO

The ILO is one of the specialist agencies of the United Nations (Ministry of Business, Innovation and Enterprise New Zealand (MBIE), 2022). Its principal aims include promoting work rights, encouraging employment opportunities, enhancing protection around social well-being, setting standards for international labour, and strengthening cooperation on issues related to the workplace (ILO, 2022b). Being a founding member of the ILO, New Zealand has maintained a strong bond with ILO from the beginning (MBIE, 2022).  The ILO membership requires forming partnerships between employers, workers, and governments to include the views of these partners in shaping programmes, labour standards, and policies (ILO, 2022b). The RSE scheme is an example of the New Zealand Government's commitment toward a tripartite partnership where the New Zealand Government, employers and business organisations, and Pacific seasonal workers come together to contribute to the development and progress of Pacific countries (ILO, 2010). New Zealand's RSE scheme has been recognised internationally as the best practice for labour migration programmes (ILO, 2022a). The main features of the RSE scheme are improved selection and recruitment, social welfare and protection of Pacific seasonal workers, and re-integration of Pacific seasonal workers into their communities at home (Bedford et al., 2017).

The RSE scheme can be criticised as it restricts the freedom of Pacific seasonal workers to select the duration of their employment and conditions of their job and to change employers to improve their conditions and wages. However, during the COVID-19 pandemic, the New Zealand Government took measures to provide flexible working arrangements, including extending visas and allowing Pacific seasonal workers to participate in jobs other than viticulture and horticulture (Bedford, 2020a). Moreover, during COVID-19 border closures, the New Zealand Government also helped Pacific seasonal workers return to their homes with the help of Pacific governments, RSE, and industry groups (Bedford, 2020b). This aligns with the ILO's guidelines on helping Pacific seasonal workers reintegrate into their home communities.

## CONCLUSION AND RECOMMENDATIONS

In summary, stranded RSE Pacific seasonal workers in New Zealand experienced many challenges due to border closures during the COVID-19 pandemic. However, the New Zealand Government, RSE, and local community groups took initiatives to support Pacific seasonal workers during the COVID-19 pandemic by considering them as part of their communities (Bailey, 2020b) and supporting the initiatives as articulated in the UNSDG, ILO guidelines and local laws. However, the New Zealand Government responded quickly by changing the conditions of Pacific seasonal workers' visas to give flexibility to RSE in shifting Pacific seasonal workers between the viticulture and horticulture sectors and regions. Globalisation theories suggest that the availability of social media platforms and the internet have effectively helped in the movement of information and expanded the social possibilities during the COVID-19 pandemic, specifically for RSE Pacific seasonal workers. However, being a semi-peripheral country, New Zealand faced difficulties attracting RSE Pacific seasonal workers during the COVID-19 pandemic. Therefore, it is recommended that

Pacific seasonal workers should be offered wages higher than living wages in their employment contracts; this will help New Zealand's Government compete against Australia in attracting more Pacific seasonal workers.

Further research is recommended using primary data to validate this information. Descriptive analysis can be used to investigate the collected preliminary data further. The qualitative method can help interpret RSE Pacific seasonal workers' social structures, behaviours, beliefs, and decisions related to cross-cultural management by RSE and the New Zealand Government. Large sample data is recommended to arrive at a more generalised conclusion.

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# PSYCHOLOGICAL DISTRESS DUE TO COVID-19 AMONG IMMIGRANTS WITH TEMPORARY VISAS WORKING IN RETAIL AND HOSPITALITY INDUSTRIES: A SYSTEMATIC LITERATURE REVIEW

## Prabhjot Kaur, Barnaby Pace, Olufemi Muibi Omisakin and Indrapriya Kularatne

### ABSTRACT

This research examines psychological distress due to COVID-19 among immigrants with temporary visas. The literature review examined the impacts of COVID-19 on immigrants, primarily those with temporary visas residing in New Zealand and other countries, showing that immigrants are more vulnerable to COVID-19 in regard to job losses because the majority of them work in industries that were hard-hit by the COVID-19 pandemic, such as retail and hospitality. The literature review also found that immigrants with temporary visas experienced psychological distress due to losing their jobs, working fewer hours, being afraid of contracting COVID-19, and changing immigration rules. The recommendations are to conduct further research in New Zealand with a larger sample to ascertain the psychological distress and other impacts due to COVID-19 and to formulate rules and regulations that will help to lessen the psychological impacts of any future pandemic scenarios.

**Keywords:** COVID-19; Psychological Distress; Immigrants with temporary visas.

### INTRODUCTION

Coronavirus Disease (COVID-19) and its associated variants have appeared as the biggest pandemic of the twenty-first century (E. L. Anderson et al., 2020; Issakhov et al., 2021; He et al., 2020; Singhal, 2020). Some COVID-19 variants spread faster and easier than the original COVID-19 variant; for example, the Omicron variant spreads more quickly and easily than the original (Centers for Disease Control and Prevention, 2022). The current COVID-19 literature demonstrates the detrimental impact of COVID-19 on people's lives, particularly immigrants with temporary visas (Dodd et al., 2021; Duncan, 2020; Fairlie, 2020; Guadagno, 2020; Organisation for Economic Co-operation and Development, 2020; Sabri et al., 2020). Belong Aotearoa (2020), Cénat et al. (2020), Kumar et al. (2020), and Singh (2020) all contend that immigrants were more likely to experience psychological distress in this COVID-19 scenario because it has negatively impacted businesses, including the retail and hospitality industries, where immigrants are vastly overrepresented. Hence, immigrants with temporary visas, for instance, work visas, are concerned about losing their jobs and legal status because their visa is tied to their job position and business (Guadagno, 2020; International Labour Organization, 2021; Sabri et al., 2020). If immigrants lose their jobs, it may be challenging for them to renew their work visas (Guadagno, 2020; International Labour Organization, 2021).

The New Zealand government has successfully prevented the spread of COVID-19 by enforcing stringent lockdown restrictions within the country and strict border closure restrictions (Every-Palmer et al., 2020; New Zealand Government, 2022a). Some businesses in New Zealand, particularly those in the retail,

hospitality, and tourism industries, as well as other small businesses, for example, the cleaning industry, have been negatively impacted by these restrictions (Baum et al., 2020; Robson, 2021). As a result, some employees experienced job loss, while others had their working hours reduced, which led to psychological distress among them (Every-Palmer et al., 2020; Rodríguez-Rey et al., 2020). According to Drapeau et al. (2012) and Leon (2004), psychological distress is a sign of an individual's mental health and might manifest as anxiety or unhappiness, and it is difficult for the individual experiencing psychological distress to manage their daily life (Arvidsdotter et al., 2016; Drapeau et al., 2012). Economist Shamubeel Eaqub predicted the retail and hotel industries in the Auckland region of New Zealand were to be the hardest hit by job losses, as cited in Robson (2021) because Auckland businesses had to contend with a protracted period of more stringent COVID-19 lockdown restrictions than the rest of the country. Therefore, COVID-19 has led to psychological distress for New Zealanders who are citizens, residents, and immigrants with temporary visas.

This literature review has mainly four sections. Firstly, it introduces the topic and then describes the research objectives and methodology. After that, it discusses the literature review insightfully with gaps. Finally, the literature review concludes with a proper discussion, future recommendations, and references.

## RESEARCH OBJECTIVES AND METHODOLOGY

The relevant literature was examined to investigate the psychological distress due to COVID-19 among immigrants on temporary visas working in the retail and hospitality industries in New Zealand. Google Scholar, ProQuest, and the Google search engine were used to access relevant published books and journal articles. Additionally, the online facilities of Otago University's Robertson Library were used to access journal publications. The selected research documents and resources were read, reviewed, and analysed to better understand the psychology and psychological distress of COVID-19 on immigrants with temporary visas in New Zealand.

## LITERATURE REVIEW

### Impacts of COVID-19 on Immigrants – Global Context

Everyone has been impacted by the COVID-19 pandemic and the resulting restricted lockdowns in New Zealand and other countries such as China and Italy (Every-Palmer et al., 2020; New Zealand Government, 2022b; Tandon, 2020). The lives of immigrants, particularly those on temporary visas such as work visas and student visas, have been affected more significantly (Dodd et al., 2021; Duncan, 2020; Fairlie, 2020; Guadagno, 2020; Sabri et al., 2020). Immigrants are more likely to experience psychological distress in these types of circumstances because they are afraid of losing their jobs, concerned about the well-being of their families, and afraid that the local community will not treat them well (Kumar et al., 2020; Singh, 2020). The International Labour Organization (2020) asserts that many immigrants would be the first to be made redundant from their jobs in countries that are drafting laws to lay off foreign employees first if layings-offs are inevitable. For example, Malaysia's Ministry of Human Resources announced on April 4, 2020, that foreign employees should be terminated first if redundancies are inevitable (Ministry of Human Resources, 2020).

Nella et al. (2015) found that Greeks experienced psychological distress for seven years after Greece suffered heavily from the global economic and financial crisis in 2008. Many people lost their jobs due to the financial crisis, and those who remained employed were fearful of losing their jobs, causing psychological distress among employees (Nella et al., 2015). According to Landsbergis et al. (2014), fear of job insecurity is strongly associated with psychological distress. Similarly, job insecurity affects compliance with occupational safety regulations (Probst & Brubaker, 2001). Job insecurity also varies according to culture, ethnicity, and immigration status (Landsbergis et al., 2014).

The current COVID-19 situation has severe psychological impacts on people's lives and jobs (Guadagno, 2020; LaRochelle-Côté & Uppal, 2020; Sabri et al., 2020). The psychological impact refers to the influence

on human psychological states induced by natural disasters or human intervention (Doherty & Clayton, 2011; Leon, 2004). These psychological impacts on humans might be positive, such as enthusiasm and delight, or negative, such as excessive alcohol consumption and depression (Leon, 2004).

The International Labour Organization (2021) estimates that 255 million full-time jobs, or about 8.8% of working hours, were lost globally in 2020. Southern Europe, Latin America and the Caribbean, and Southern Asia had disproportionately high working-hour losses (International Labour Organization, 2021). Working-hour losses increased almost four times in 2020 compared to 2009, the year of the global financial crisis (International Labour Organization, 2021). This pattern persisted in 2021 as well, with 140 million full-time jobs lost in the first quarter and 127 million in the second (J. Berg et al., 2021). It has also been noted that predicting how quickly employment will return to normal can be challenging because it took more than five years for the labour market to rebound after the Great Recession ended (Handwerker et al., 2020; Rampell, 2020).

Awad (2009) observed that during previous crises, such as the global financial crisis of 2009, immigrants and refugees showed signs of being more vulnerable to job losses. Guadagno (2020) stated that workplace closure could result in irregularity in countries where an employee's immigration status relates to their jobs and business. If an immigrant loses their job or their income decreases because of a reduction in working hours brought on by COVID-19, they may not be able to renew their work visas (Guadagno, 2020; International Labour Organization, 2021). According to Sabri et al. (2020), COVID-19 caused immigration procedures to take longer than expected which in turn delayed the processing of visas for immigrants who were already employed in the United States of America (USA). Because of this, most immigrants with temporary visas were concerned that they would lose their jobs if they did not receive new work visas within time (Sabri et al., 2020). They also disclosed that some immigrants had lost their jobs because of the COVID-19 lockdown in the USA, while others were fearful of losing their jobs (Sabri et al., 2020). As a result, immigrants with work visas worried about their financial condition, which caused conflict for their families to meet necessities such as food and rent (Sabri et al., 2020). These conflicts, ultimately COVID-19's results, have made immigrants—particularly those with valid visas—more psychologically distressed (Cénat et al., 2020; Fairlie, 2020).

Numerous other studies have examined this issue and discovered that the COVID-19 pandemic significantly and negatively affected international students (Alaklabi et al., 2021; Alam et al., 2021; B. Song et al., 2021; Xu, 2021). Additionally, the authors observed that COVID-19's impacts on international students led them to experience moderate to severe psychological distress (Alaklabi et al., 2021; Alam et al., 2021; B. Song et al., 2021; Xu, 2021). According to Xu (2021), the psychological distress experienced by international students during COVID-19 in China was caused by external factors such as lockdown restrictions, social distancing, and a lack of social support, as well as internal factors such as values and learning behaviour in online classes. Additionally, Alaklabi et al. (2021) noted that when educational institutions cut back on student welfare programmes, such as health services, the situation for international students in the USA became more problematic and caused them great psychological distress. Due to these factors, many international students were left with heavy financial burdens, making it difficult for them to buy necessities, for example, food (Alaklabi et al., 2021; B. Song et al., 2021).

Immigrants undoubtedly lost jobs because of COVID-19's influence on industries where they were heavily represented, such as retail and hospitality; they also experienced other issues, including fear of contracting COVID-19, discrimination, criticism, and harassment, all of which have led to psychological distress in them (Baum et al., 2020; Borjas & Cassidy, 2020; International Labour Organization, 2021; Mia & Griffiths, 2020). However, Barrero et al. (2020), Barrero et al. (2021), and the International Labour Organization (2021) reported that several higher-skilled service industries, such as information technology (IT) and financial services, experienced positive employment growth during and after COVID-19.

Impacts of COVID-19 on Immigrants – Australia and New Zealand Context

According to Askola et al. (2021) and L. Berg et al. (2020), the COVID-19 crisis, related restrictions, closures, and adjusting immigration rules created job insecurity in the job market in Australia. Temporary visa holders were more vulnerable to these circumstances because they were working in industries with high job insecurity, such as the retail and hospitality industries. According to Dodd et al. (2021), who conducted a significant study in Australia, a job is one of the main ways that domestic and international students support themselves financially while studying. Over half of the 787 university student participants, including domestic and international students, had their employment significantly impacted by COVID-19 (Dodd et al., 2021). Therefore, it was challenging, especially for international students, to fund their upcoming tuition without a secure job because they pay much higher tuition fees than domestic students (L. Berg et al., 2020; Dodd et al., 2021). Likewise, they struggled to pay for necessities such as food and rent (L. Berg et al., 2020; Dodd et al., 2021). The study also showed that domestic and international students in Australia who took online courses due to COVID-19 experienced psychological distress, particularly in relation to the difficulty of corresponding with a lecturer (Dodd et al., 2021).

According to a few other studies, students who were studying online because of COVID-19 reported facing difficulties in communicating with their lecturers and balancing their studies with other responsibilities at home (Chakraborty et al., 2021; Clarke & Munro, 2021; Malik & Javed, 2021; Martin, 2020). Additionally, Dodd et al.'s (2021) research support findings from a national survey of 5000 temporary visa holders in Australia (Unions NSW Report, 2020). The COVID-19 pandemic caused 60% of international students to lose their jobs and a significant reduction in working hours by 21%. To save money due to their precarious financial situation, 26% of participants shared a bedroom, and 46% were compelled to skip meals every day (Unions NSW Report, 2020). Therefore, because of COVID-19, international students were more vulnerable, and some of them were willing to work for less than the minimum wage in Australia to support themselves, which worsened their situation (Farbenblum & Berg, 2020; Vincent, 2020).

Most countries closed their borders as a result of COVID-19 (Han et al., 2020), including New Zealand, which reopened its border fully on 1 August 2022 (New Zealand Government, 2022b; New Zealand Immigration, 2022). Many New Zealand businesses, particularly small and medium-sized ones, suffered negatively as a result of COVID-19 restrictions, which caused them to cut staff (Baum et al., 2020; Stats NZ, 2020). As a result, many people lost their jobs in New Zealand (Stats NZ, 2020), and immigrants with work visas were particularly vulnerable to losing their jobs (Belong Aotearoa, 2020; Duncan, 2020; Fairlie, 2020; Guadagno, 2020; Organisation for Economic Co-operation and Development, 2020; Robson, 2021; Sabri et al., 2020).

A study on immigrants living in New Zealand by Belong Aotearoa (2020) discovered that immigrants on temporary visas, especially those on work visas who lost their jobs, were more vulnerable and required more support because they were going through psychological distress due to their job loss. Also, according to Belong Aotearoa (2020), immigrants found it challenging to change to a different profession due to the restrictions imposed by their work visas, and this was further exacerbated by the significant uncertainty in the job market brought on by COVID-19. Additionally, research suggests that re-entering the job market after being out of it is challenging because job seekers will be competing against more skilled job seekers (Donthu & Gustafsson, 2020). In order to meet the new employment requirements and compete with more skilled competitors, some immigrants had to convert their work visas to student visas by applying for further study, and others were planning to do the same within the next 12 months (Belong Aotearoa, 2020).

Various studies found that job losses caused by COVID-19 were directly related to individuals' psychological distress, especially immigrants' psychological distress (D. Anderson et al., 2020; Basyouni & El Keshky, 2021; Belong Aotearoa, 2020; Cénat et al., 2020; Every-Palmer et al., 2020; Fairlie, 2020; Sabri et al., 2020; Serafini et al., 2021). Aside from job losses, some other factors were linked to the psychological distress of immigrants with temporary visas. J. Song and McDonald (2021) found that registered Chinese nurses in

New Zealand throughout COVID-19 experienced a variety of issues: 47.06% of the participants experienced unpleasant work experiences, including criticism, racial discrimination, and workplace harassment. These unpleasant experiences during COVID-19 at work potentially caused these nurses to experience psychological distress (Labrague & Santos, 2020; Master et al., 2020; World Health Organization, 2020).

According to the Economist Shamubeel Eaqub, as cited by Robson (2021), Auckland, New Zealand, was expected to be hit the hardest by job losses in 2021, particularly in the retail and hospitality industries, due to more extended COVID-19 lockdown restrictions than the rest of the country (New Zealand Government, 2022a; Robson, 2021). The number of unemployed people in Auckland, New Zealand, increased by 15,800 in September 2020 compared to the previous quarter, March 2020, and by 14,200 compared to the previous year's quarter, September 2019. (Stats NZ, 2020). However, employment in the housing, retail trades, and food services industries in Auckland, New Zealand, fell by 6.5%, indicating a significant impact on these sectors (Stats NZ, 2020).

Despite about 38,000 more jobs being filled in December 2020 compared to November 2020, New Zealand's annual growth remained below pre-COVID-19 levels (Stats NZ, 2021). However, job growth was only 0.6%, or just under 13,000 jobs, when compared to the same period in 2019, as shown in Figure 1 below (Stats NZ, 2021). Figure 1 demonstrates that before the COVID-19 pandemic in New Zealand, there was a 2% to 4% increase in job growth between January 2019 and March 2020. (Stats NZ, 2021). After accounting for seasonal effects, the number of filled positions increased by 0.8%, or nearly 17,000, between September and December 2021. (Stats NZ, 2022). According to these numbers, employment growth has resumed, though much more slowly than it was prior to COVID-19. It is undeniable that New Zealand's employment growth has recovered since the COVID-19 impact, but it is still unknown how many immigrants on temporary visas are taking advantage of these job opportunities.

Figure 1 – Growth in Filled Jobs, January 2019–December 2020 (Stats NZ, 2021)
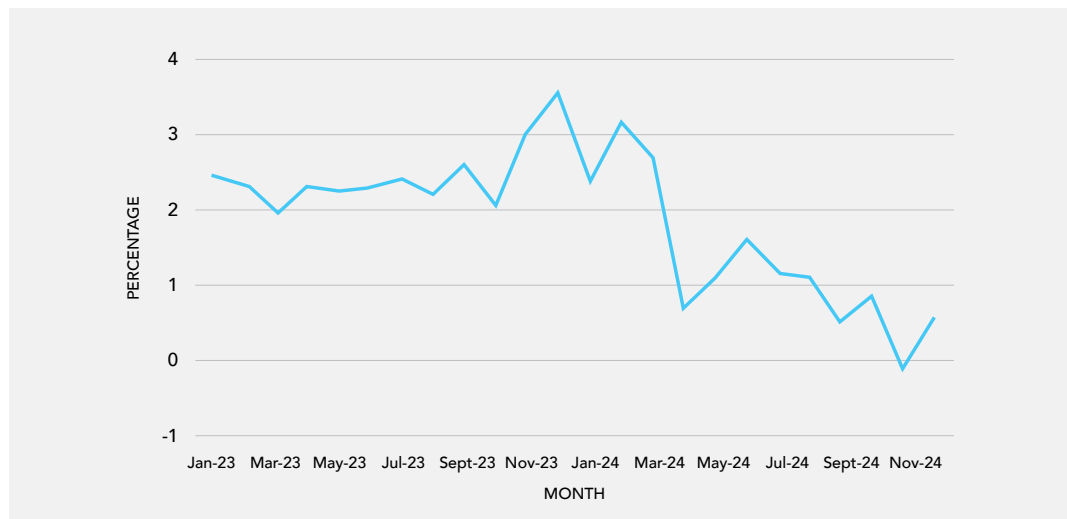


Note. This figure illustrates growth in filled jobs between January 2019-December 2020 in New Zealand. From Stats NZ (2021). (https://www.stats.govt.nz/news/jobs-up-in-december-but-annual-growth-slows).

The Ministry of Business, Innovation and Employment (2022) observed in New Zealand that a rise in the number of job positions advertised in the year leading up to February 2022 indicated a persistent rise in labour demand. Clerical and administrative jobs (40%), professional jobs (36%), and sales jobs (35%) were

the professions with the highest increases in positions advertised during this period. The primary and hospitality industries experienced the lowest increase in job positions advertised in the year up to February 2022 (Ministry of Business, Innovation & Employment, 2022). Although some industries, such as IT and clerical and administrative jobs, are experiencing increased demand for employees, the researcher is unsure whether immigrants on temporary visas are benefiting from job growth in these industries due to their restricted visa conditions and qualifications.

Gaps in the Literature

There is little relevant literature available on the psychological distress and impacts of COVID-19 on the lives of employees and immigrants on temporary visas in New Zealand (D. Anderson et al., 2020; Belong Aotearoa, 2020; Every-Palmer et al., 2020; J. Song & McDonald, 2021). Moreover, several studies have indicated that the financial and IT industries have been significantly contributing to total employment growth throughout the COVID-19 pandemic (Barrero et al., 2020; Barrero et al., 2021; International Labour Organization, 2021; Ministry of Business, Innovation & Employment, 2022). However, it is unexplored if individuals on temporary visas are able to apply for these positions.

## CONCLUSION

New Zealand's initial response to the COVID-19 pandemic included strict lockdown restrictions throughout the country as well as border restrictions to reduce COVID-19 community transmission. However, the success of these strategies did not come without a cost, both financially and socially (Every-Palmer et al., 2020). The systematic literature analysis revealed that immigrants on temporary visas have been negatively impacted by the COVID-19 pandemic and are more vulnerable to its impacts on their job prospects worldwide. Most immigrants with temporary visas, particularly those employed in industries such as retail and hospitality, were disproportionately affected by COVID-19 and reported higher levels of psychological distress (Baum et al., 2020; Organisation for Economic Co-operation and Development, 2020; Rodríguez-López et al., 2021). They experienced job losses, reduced working hours, altered immigration rules, workplace hostility, and a fear of contracting COVID-19 (Baum et al., 2020; Borjas & Cassidy, 2020; Dodd et al., 2021; Duncan, 2020; Fairlie, 2020; Guadagno, 2020; International Labour Organization, 2021; Mia & Griffiths, 2020; Sabri et al., 2020). Due to job losses and reduced hours of work, it was even difficult for them to meet their family's basic needs, such as food and rent. It was extremely challenging for international students who lost their jobs as a result of the COVID-19 impact to maintain their financial stability (Alaklabi et al., 2021; L. Berg et al., 2020; Dodd et al., 2021; B. Song et al., 2021). As a result, the primary factors closely connected with the psychological distress of immigrants on temporary visas were job loss or worry of job loss, fear of contracting COVID-19, and changes in immigration rules as a result of COVID-19 (Belong Aotearoa, 2020; Dodd et al., 2021; Guadagno, 2020; Sabri et al., 2020; Serafini et al., 2021). This study also discovered that several industries, such as IT and financial services, are now enabling to reduce unemployment caused by the COVID-19 pandemic (Barrero et al., 2020). However, it is unsure how many immigrants on temporary visas are benefiting from these job prospects.

Thus, the first recommendation is that more research should be undertaken in New Zealand with a larger sample of New Zealanders, permanent residents, and the various categories of temporary visa holders, such as working holiday visas and visitor visas, to ascertain the psychological distress and other impacts of COVID-19 on them since these are not always identical for everybody. The results of more research will assist in formulating a number of rules and regulations that will help to lessen the psychological impacts of any future COVID-19 outbreaks for all residents of New Zealand, including immigrants on temporary visas. The final recommendation is that research should be undertaken to determine the number of immigrants with temporary visas who have benefited from and continue to benefit from finding a job in other industries with high employment growth rates, such as IT and financial services, after losing their jobs due to COVID-19 in the hard-hit industries such as retail and hospitality.

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Article

# IMPACT OF COVID-19 ON INDIAN MIGRANT WORKERS IN GULF COOPERATION COUNCIL

## Nordenla Bhutia and Indrapriya Kularatne

### ABSTRACT

The long-existing Kafala system has again made headlines during the COVID-19 pandemic. A traditional system that provided protection and hospitality during the early 1900s, this is now a system of emotional distress because it has facilitated unfair treatment and increased wage theft for hardworking migrant workers in the Gulf Cooperation Council (GCC) during COVID-19. Therefore, this research investigated the issues such as the Kafala system and wage theft faced by Indian migrant workers living in the GCC. It brings to light the emotional, social, and economic plights of the workers in the GCC's hydrocarbon industry, many of whom were displaced during the COVID-19 pandemic. This research also investigates the diverse cultural aspects faced by Indians living and working in the Gulf Corporation Countries using theories such as Appadurai's Theory of Globalisation, Galtung's centre-periphery model, and Hofstede's cultural dimensions model. Furthermore, the involvement of the International Labour Organisation, the United Nations Sustainable Development Goals and Human Rights are highlighted to ensure that favourable conditions were being considered to encourage a healthy work-life balance for Indian migrant workers in the GCC.

Key words: COVID-19, Gulf Cooperation Council (GCC), migrants, Kafala system, wage theft

### INTRODUCTION

In May 1981, the Gulf Cooperation Council (GCC) was formed, consisting of Kuwait, Oman, Bahrain, United Arab Emirates (UAE), Qatar, and the Kingdom of Saudi Arabia (KSA) (Qureshi, 1982). The objectives of the GCC are effective coordination, interconnectedness, and cooperation between members of the GCC to achieve unity (GCC, 2022). Additionally, it was established to formulate similar political, cultural, economic, and environmental regulations Ministry of External Affairs (MEA), 2013). The GCC countries depend on hydrocarbons such as oil and gas (Afework et al., 2019) as they form most of their total revenue (Mirzoev et al., 2020). A solid bilateral relationship between India and the GCC allows for a flow of migrant labour force (MEA, 2019). According to the International Organisation for Migration (IOM) a migrant is a "person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons" (IOM, 2022). The Indian diaspora living in the GCC are identified as the most migrated nationals in the world and accounts for one-third of the total remittances received by India (Mitra & Kasliwal, 2020). In fact, MEA (2019) also stated that about 8 million Indians live and work in GCC. Indian citizens migrate to other countries for education, work, and a better lifestyle.

### RESEARCH OBJECTIVES

As the Coronavirus Disease (COVID-19) pandemic spread, governments in each GCC country have undertaken measures to flatten the curve. However, many Indians living in GCC have been living in unfavourable circumstances. Thus, this research focussed on Indian migrant workers working in the

hydrocarbon industry in GCC. The research investigated the cultural dimensions faced by Indian migrant workers during COVID-19. Theories of Globalisation, Appadurai's 5 Scapes, and Galtung's and Hofstede's cultural dimensions were also used to better understand several aspects of the cultural dimensions of GCC. The roles of the United Nations Sustainable Development Goals (UNSDG) and the ILO were also investigated to understand the decision-making process of GCC during the COVID-19 pandemic and to highlight the ethical aspects. Finally, this report concludes with recommendations to ensure a better situation for the Indian migrant workers in GCC.

## RESEARCH DESIGN

This is desk-based research. The method is cost-effective as all information and data collected were extracted from published literature. The availability of the literature determined the validity of the information collected. This investigation could also be considered an exploratory study as data and information on this topic was not readily available, especially in the context of the COVID-19 pandemic era. Many of the resources were current and published within the last five years. All data and information were retrieved from resources published in peer-reviewed journals and reputed sources to ensure the reliability of the findings and conclusions. Primary data was not collected for this research.

## CULTURAL DIMENSIONS OF INDIAN MIGRANT WORKERS IN GCC

The nature of management in countries depends on their culture. The philosophies of one country may not always be in harmony with others. How each country deals with society are very fabric of their values, beliefs, religion, and culture. Thus, leading to discussions on techniques and management theories in the GCC. As a result, two main points namely the Kafala system and wage theft were investigated and are discussed below.

## THE KAFALA SYSTEM

The Kafala system in all GCC countries severely impacts the security of migrant workers (Aboueldahab, 2021) and resembles the GCC countries' national character (McCrae & Terracciano, 2006). It is a sponsorship system where employers have considerable power over migrant workers (ILO, 2017; Sharma, 2022). The existence of the Kafala system can be traced back to the early 1900s (Nelson, 2014). It was used by the nomadic settlers of the Arab Peninsular - Bedouins (Nelson, 2014). The Bedouins were animal herders that moved around the desert for their livelihood. The Kafala system had a noble meaning because it provided hospitality and guaranteed protection for foreigners (Nelson, 2014).

Fast forward to the 1940s, the Kafala system was capitalised (Robinson, 2021). Robinson sated that after the discovery of oil in the Middle East, it only made sense for the countries to implement the Kafala system as the demand for workers increased. This system allowed the employer to manage migrant workers in any company, including their rights: to work, leave a company or work for another employer (Robinson, 2021). Initially, The Kafala system was used for the protection and safety of foreigners but has since evolved and become a major concern for the human rights of migrant workers in the GCC. This Kafala system is identified under Hofstede's cultural dimension of Power Distance (Hofstede, 2022). It must be noted that the data from Hofstede is a decade old but is still applicable to this investigation. The Power Distance shown is 90 for Kuwait, 72 for Saudi Arabia and 93 for Qatar (Hofstede, 2022). These countries fall under the GCC who are utilising the Kafala system rigorously. The Power Distance in the GCC is highly centralised, and hierarchical order is accepted without any justification (Hofstede, 2022).

The motivating factors for Indian citizens to move to GCC are to earn money and improve their living standards (Habibullah, 2021). Hence, Indian people from states such as Tamil Nadu, Uttar Pradesh, Bihar, and others have migrated to work in different industries of GCC, including the hydrocarbon industry (Calabrese, 2020).

The COVID-19 pandemic has brought about many changes that have altered the face of employment, migration, security, health, and safety worldwide (Rupani et al., 2020). As the COVID-19 pandemic spread worldwide, many migrant workers were left trapped, displaced, and faced monetary challenges to return to their homeland (Kancharla, 2022). Therefore, the Government of India decided to conduct repatriation operations for Indian migrants working and living in foreign countries, including the GCC (Rajan & Arokkiaraj, 2022). However, on 24th March 2020, the Prime Minister of India announced a nationwide lockdown for 21 days (Chandrashekar, 2020), closing all international borders and halting all rescue missions (Rajan & Arokkiaraj, 2022).

In times like this, many migrant workers were denied their rights, for example, a petroleum company in UAE refused to pay two months' wages to their staff before returning to India (Kuttappan, 2020). The other effect of the COVID-19 pandemic has been a reduction in oil prices and a re-evaluation of foreign employment (Al-Ghalib Alsharif & Malit, 2020). A petroleum company in Bahrain called Bahrain Petroleum has made hundreds of foreign expats redundant (Salama, 2020) and the Kuwait Petroleum Corporation announced a ban on foreign employment from July 2020 (Kajal, 2020). These activities were enabled and made more straightforward due to the Kafala system.

Systems such as the Kafala system are unethical, a liability for human exploitation and have no moral grounds to continue (Kestenbaum, 2022). They favour the GCC and treat migrant workers from any part of the world with no dignity and respect (Robinson, 2021). Such systems are examples of modern-day slavery, denying migrant workers their human rights and paying no heed to their needs (Kumar & Akhil, 2021). The Kafala system reduces migrant workers' democratic freedom, human rights, and civil liberties, thus creating a bias, especially during the COVID-19 pandemic (Migrant Rights, 2022). The bias in GCC has been more significant as it gave rise to nationalism (Alsahi, 2020). Thus, creating tension, disputes, and hatred against migrant workers living in the GCC. The policies of such countries chose to cater to the needs and lives of their citizens (Alsahi, 2020). The advent of the COVID-19 pandemic has further deprived migrant workers of their rights and created a sense of displacement (Babar, 2020). Nonetheless, the KSA and Qatar are working towards changing the Kafala system, but other GCC countries have not mentioned such changes (Aboueldahab, 2021).

## WAGE THEFT

The issue of wage theft is also an implication of the Kafala system (Robinson, 2021). In 2020, the GCC faced a dual shock: the COVID-19 pandemic and a decrease in oil prices (Al-Ghalib Alsharif & Malit, 2020). The demand for petroleum decreased due to heavy COVID-19 lockdowns internationally. As a result, issues such as wage theft have increased. The primary group affected by this issue were the migrant workers in the GCC during the COVID-19 pandemic. Thus, many public and private companies in the GCC countries have made their employees redundant or forcefully terminated the working contracts of migrant workers (Kajal, 2020; Salama, 2020).

Furthermore, there was no government intervention as a result of the wage theft issue except for nationalising jobs in the GCC. For example, a worker from a petroleum company has been repatriated without two-three months of wages (Kuttappan, 2020). In Bahrain, workers from petroleum companies had their employment forcefully terminated (Max-Security, 2020), and in the UAE, migrant workers were denied their wages (Business and Human Rights Resource Centre (BHRRC), 2020). The issue of wage theft is not only for migrant workers working in the hydrocarbon industry but also in other sectors like construction, hospitality, and household contractors (Kumar & Akhil, 2021). Issues such as delayed wages, unpaid wages, and repatriation without wages or benefits have escalated during the COVID-19 pandemic (Rahman, 2020; Nagraj, 2020). Although such issues have been highlighted to various non-profit organisations (NGOs), international and national governing bodies, sadly, no justice has been provided (BHRRC, 2022; Buhejji, 2022). However, the MEA in India allows victims of wage theft to lodge grievances against companies in GCC in India with the help of Consular Management Systems (Parvathy, 2021).

Many migrant blue-collar workers have been stranded without wages for months during the COVID-19 pandemic in GCC. Migrant workers that come to the GCC work hard for every penny to send home for house loans, education for their children or to earn a better lifestyle (Habibullah, 2021). It must be noted here that remittance from a foreign country adds to the growing economic boom of India. It is primarily due to remittances that add to a country's gross domestic product (GDP). As of 2012, India received United States Dollars (USD) $69 billion (Bhaskar, 2013) in remittances but this has since increased to USD $87 billion in 2021 (World Bank, 2021). This supports Appadurai's theory of Globalisation under Finanscapes, further discussed in the Theories of Globalisation section.

It is important to note that the ongoing COVID-19 pandemic has caused global economic unrest. Research shows that the global economic crisis due to the COVID-19 pandemic has led to the Great Recession (Mencutek, 2022). The prices for crude oil have also decreased from USD $64 per barrel to a low USD $23 per barrel (Oxford Economics, 2021). The International Monetary Fund (IMF) has reported that GCC must undertake economic reforms to avoid the exhaustion of foreign reserves (Mirzoev et al., 2020). It has displaced people, forced them to move out of countries, lose jobs, and causes overwhelming public health issues. Studies suggest that there has been an increase in health issues like anxiety and depression as a consequence of the COVID-19 pandemic (Khan et al., 2021). Migrant workers stranded without any financial backing have been subjected to mental health issues (Asi, 2020). However, the health facilities are better for migrant workers in the GCC compared to the broader Middle East and North African (MENA) regions.

## THEORIES OF GLOBALISATION

This research investigated two theories of globalisation to understand the impact of the COVID-19 pandemic on Indian migrant workers, the Galtung's centre-periphery model and Appadurai's theory of globalisation are discussed below:

## GALTUNG'S CENTRE-PERIPHERY MODEL:

Galtung's centre-periphery model is the structural relationship between nations in the centre and periphery (Galtung, 1971). The centre in this context is the advanced nation-state that has metropolitan characteristics (Simon, 2011). In contrast, the periphery constitutes nation-states that are less advanced and have less power over the centre (Simon, 2011). Through this model, analysis was undertaken to determine the relationship between India and the GCC. Since the oil boom in the 1970s, hundreds of workers from India have migrated to the GCC for opportunities (Habibullah, 2021). The bilateral trade ties between GCC and India are robust and stable (Mitra & Kasliwal, 2020). However, due to the COVID-19 pandemic, it has weakened these ties by leaving migrant workers stranded and distraught (Rajan & Arokkiaraj, 2022). Galtung (1971) argues imperialism in a way where the centre has power over the periphery. The situation with GCC at the centre and Indian migrant workers at the periphery during the COVID-19 pandemic is similar.

The GCC countries began phasing out Indian migrant workers in 2020 (Alsahi, 2020). The living conditions of the migrant workers were poor to the extent that they were unable to socially distance themselves since many migrant workers live in overcrowded accommodations (Migrant Rights, 2020). Thus, creating an incubator for COVID-19. However, the bilateral trade between the GCC and India have made the two dependent on one another. While one exports oil, the other exports goods, and services (MEA, 2013; Mitra & Kasliwal, 2020). The blue-collar workers who migrated to GCC have more influence on the social and economic well-being of these countries (Rahman & Kumar, 2022). The population in each GCC country is low and requires more assistance from other countries for their upliftment. Hence, it is difficult to conclude that GCC and India fall under the centre or periphery. Although Galtung argues that countries at the centre are economically more robust than those at the periphery (Galtung, 1971), it is difficult to confirm this hypothesis in relation to the recent economic crisis due to the COVID-19 pandemic (Mencutek, 2022).

Furthermore, the border closure of India and GCC in March 2020 worsened the living conditions for migrant workers. They were unable to leave their host countries alongside being subjected to unemployment. Thus, living a life under the autocratic rule of the GCC governments. The GCC countries like Oman, Kuwait, Qatar and KSA began replacing migrant workers with their citizens (Max-Security, 2020). However, such situations have also led the way towards nationalism (Alsahi, 2020). Galtung's theory also argues that there is harmony between the centre nations and periphery nations and vice versa (Galtung, 1971).

The Indian state of Kerela is one of the leading voices for repatriation missions, primarily due to the higher number of its population working in the GCC countries (Rajan & Arokkiaraj, 2022). After multiple petitions and news of mistreatment in the media, India's central and state governments initiated the Vande Bharat Mission (Business Standard, 2021), repatriating Indian nationals stranded in foreign countries during the COVID-19 pandemic. The Vande Bharat Mission is one of the most expensive rescue programmes the country has ever engaged in. The funds for this mission were provided from the Indian Community Welfare Fund (ICWF) and cost approximately USD $480 million (MEA, 2022) and according to the MEA, there were 11 phases of the Vande Bharat mission and by 31st October 2021, there had been more than 217,000 flights carrying approximately 18.3 million passengers from foreign countries (Press Information Bureau (PIB, 2021). The flights carried distressed and stranded passengers from the GCC countries. These flights were commercial, and travellers had to bear the cost of flying back to their home country (Varma, 2020).

Table 1 below shows the number of Indian migrant workers from the GCC countries that were repatriated during the COVID-19 pandemic (Rajan & Arokkiaraj, 2022) and it highlights the number of people from one state of India, Kerela (in blue) repatriated from each GCC country. The total number of Indians repatriated from the GCC was 884,148 and for Kerela was 189,674 (21.5%) (Rajan & Arokkiaraj, 2022).

Figure 1 – Percentage and number of Indian people from the state of Kerela repatriated from GCC countries during the COVID-19 pandemic (Rajan & Arokkiaraj, 2022)
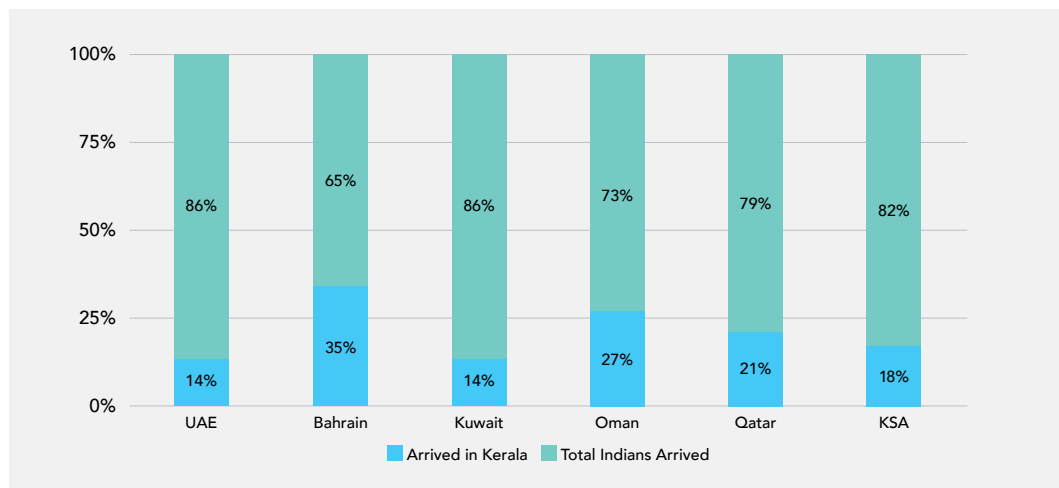


## APPADURAI'S THEORY OF GLOBALISATION

Appadurai's Theory of Globalisation provides a global cultural flow, and argues that people will move from one place to another in search of an imagined place, influence one another, and cultures will overlap in time (Appadurai, 1990). The movement of people will allow the flow of ideas, cultures, and social structures from one country to another (Appadurai, 1990). The separation between economy, culture, and politics led to the creation of five scapes, thus giving perspectives to Appadurai's Theory of Globalisation. These five

scapes are a) ethnoscapes; b) mediascapes; c) technoscapes; d) finanscapes, and e) ideoscapes. Each of these scapes is significant in the modern global world; however, for this investigation, only two scapes are applied. Ethnoscapes analyses the flow of people from India to GCC countries and vice versa and it dwells on affinity and ties of people from various parts of the world. Whereas finanscapes analyse the effects of money flow from one country to another and the importance of remittances on the economic growth of the country (Appadurai, 1990).

"Ethnoscapes is a flow of people from one country to another searching for the imagined world" (Appadurai, 1990). As seen in the GCC, due to the bilateral relationship between India and GCC this has enabled the flow of people. The search for an imagined world has never stopped and will not stop as humans progress into the future; as humans evolve, so do their needs and wants. However, the focus will shift towards the accumulation of groups causing a shift in production value, technologies, and policies (Chun, 2012). In Hofstede's cultural dimensions model, GCC countries score 27 in long-term orientation, showing a close affinity for their traditions and past (Hofstede, 2022). Thus, policies like the Kafala system have favoured well in a situation like the COVID-19 pandemic, where companies have a direct impact on the livelihood of the migrant workers living in GCC countries (ILO, 2017). Thereby controlling the production value and safety of the citizens over the migrant workers by forcing them out of the GCC.

Financescapes are the flow of capital from one country to another (Appadurai, 1990). It is important to note that scapes, as a suffix were chosen to stand for the flow of capitalism (Ferreira, 2015). Finanscapes have been criticised as an abstract logic (Heyman & Campbell, 2009). However, the flow of capital has led to the rise of economic exchange. Thus, Indian migrant workers in the GCC countries have been a positive influence in adding to the overall GDP of the country. In 2019, India received about $83 billion in remittances, including goods and services provided to the GCC (Rai, 2022). According to the World Bank (2021), remittances in India were estimated to increase by 4.6 percent, close to about USD $87 billion. Indians that migrated to the GCC since the oil boom in the 1970s have been sending their money back to their homeland, India. The remittances helped to supply food, quality education, and health care facilities, all adding to the UNSDG (Kuttappan, 2020) as discussed in the next section. This also shows higher migration to GCC countries and hence higher the volume of remittances received. The remittances received add to the Indian economy and enhance the country's economic stability. The World Bank has projected growth in remittances despite the prevailing COVID-19 pandemic (World Bank, 2021). Furthermore, the notion of Financescapes implies fast-paced movement of capital that influences the global culture (Appadurai, 1990). However, it cannot function without the movement of other scapes like technoscapes, ethnoscapes, and mediascapes (Appadurai, 1990).

## ROLE OF UNSDG, ILO AND HUMAN RIGHTS UNDER THE KAFALA SYSTEM

According to MEA (2019), approx. 8.5 million Indians live and work in the GCC, the second-highest number of migrant workers in the GCC countries. They add to the largest workforce in GCC's varying industries and help increase their economic stability. According to World Bank (2021), India has received the highest number of remittances from the GCC countries, thereby adding to the GDP of India. During the COVID-19 pandemic, migrant workers have been susceptible to mistreatment and abuse with ongoing issues due to the Kafala system and wage theft. Thus, the ethical standards of GCC companies are questioned due to the increasingly negative reviews from the migrant labour force.

Bodies such as the ILO were formed in 1919 to encourage decent working conditions for all people by bringing together governments, employers, and workers (ILO, 2022). The ILO policies and standards were signed by 187 member states, including the GCC countries, thus, enabling fair and decent treatment of migrant workers (ILO, 2022). For instance, the GCC were working towards extending work visas of migrant workers (Marchand, 2022). However, various reports, research and news show a different side; for example, the reported loss of jobs in the hydrocarbon industry has increased primarily due to a decrease in oil prices tied to the COVID-19 pandemic (Esam, 2021). At the same time, workers in KSA have been waiting to renew

their visas, extend their contracts or leave the country; the GCC employs the largest number of migrant workers (Hammer & Adham, 2022; Rutkowski & Koettl, 2020)

Amidst all the chaos of the COVID-19 pandemic, the ILO has been supplying provision and aid. During the repatriation of workers from GCC, the ILO has delivered technical support and space for consultation between relevant stakeholders like recruitment agents in home countries (ILO, 2020). The Government of India has been involved in repatriating Indian migrant workers from the GCC and has been collecting information on the repatriated workforce to add to their skill registry, thus allowing for the reintegration of workers into the Indian economy (ILO, 2020).

Workers in GCC were also tied to the Kafala system, being prevalent under the watchful eye of ILO. As per Article 4, Article 5, Article 7, Article 13, and Article 25 in the United Nations Human Rights Charter established in 1948, the Kafala system is a threat to human rights (United Nations, 2022). The recently established UNSDG in 2015 had no firm commitments to enforce a rule that helps abolish the Kafala system (UNSDG, 2022). However, the organisation ensures that goals are established to improve all human lives and protect the environment. Recent developments in Qatar have shown that the much-criticised Kafala system is in the process of being revised (Aboueldahab, 2021). One factor was due to the football World Cup being run in Qatar in 2022. Although the nationalisation process in the GCC countries was firm, the lack of skilled workers in construction and other industries has proven otherwise.

The decrease in oil prices during the COVID-19 pandemic had proven to be a challenge. The GCC's source of revenue is the highest from hydrocarbons. The GCC's heavy reliance on the hydrocarbon industry makes them imbalanced (Mirzoev et al., 2020), primarily due to the sustainability development goals (SDG) that have been set forth by the UN (UNSDG, 2022). The GCC developed due to the oil boom in the 1970s, and the overuse of natural resources has maintained their impact on the global climate for decades (Whiteaker, 2022). It also strays away from the seventh goal of the SDG, to ensure access to sustainable, modern, and reliable energy (UNSDG, 2022), along with Goal 11 – Sustainable Cities and Communities, Goal 12 – Responsible Consumption and Production, Goal 13 – Climate Action where the global goal is to stay below a global temperature increase 1.5° and Goal 16 – promoting Peace, Justice, and Strong Institutions listed in the SDG (UNSDG, 2022). Failing to adapt and diversify revenues will lead to climate issues, a decrease in hydrocarbon reserves and eventually affect worldwide.

While the unfavourable reviews of the GCC countries are floating in the international news, countries within the GCC like KSA, Qatar, Oman, Bahrain, and Kuwait have all been planning to establish green cities and clearer SDGs (GCO, 2022; Kuwait, 2019; SEA, 2021). Furthermore, KSA has been planning to develop a futuristic Neom city, designed to be built linearly in a utopian approach and depends on sustainable energy, attracting migrant workers and international investments (Neom, 2022). However, ethical doubts linger around the Crown Prince of the KSA primarily due to the unexpected death of international journalist Jamal Khashoggi (BBC, 2021). Thus, creating a pessimistic look at the ethical principles of a country that values culture, morals, and integrity.

## LIMITATIONS AND CONCLUSIONS

The GCC faced two significant issues in 2020 - a decrease in oil prices and the COVID-19 pandemic. The modern slavery systems, such as the Kafala system, are a dominant factor in the GCC countries of the MENA region. The Kafala system has caused international headlines and questions about the existence of Human Rights, ILO and other such international organisations that works towards the betterment of individuals. Issues such as wage theft have been ongoing before the COVID-19 pandemic and have become more prevalent, with examples of Indian migrant workers returning home without months of wages and returned distressed and distraught (Parvathy, 2021). Many lost their jobs with no prospects. The Indian government's initiative to bring back Indian migrant workers was successful but under immense scrutiny and criticism (BHRCC, 2020). The reaction could have been more strategic and faster.

Additionally, reverse migration in India has increased unemployment rates. The international migrant workers repatriated did not receive relief packages. Kerela was the only state that provided such provisions (Parvathy, 2021). The expats in Kerela received funds to facilitate business ventures under the Department Project for Returned Emigrants (NDPREM) scheme (BHRCC, 2020). However, other states like Uttar Pradesh and Bihar have not made such progress (BHRCC, 2020). It is also important to note here that a Skilled Workers Arrival Database for Employment Support (SWADES), a joint venture of the Ministry of Skill Development & Entrepreneurship, the Ministry of Civil Aviation and MEA, was created where the skills and experiences of migrant workers were recorded to meet the requirements of Indian and foreign enterprises (Kancharla, 2022).

Many people move from one place to another in search of the imagined world, only to be duped and mistreated by longstanding barbaric policies in the host country; such policies being one-sided and only work for the dominant country's benefit (Alsahi, 2020). Therefore, governments must investigate the changing global scenarios and change policies that will help migrant workers work in a safe environment. The immigration rules from each country must be investigated to ensure that migrant workers that move from one country to another in the ever-rising globalisation are secure and safe.

In conclusion, this investigation focussed on the impacts of COVID-19 pandemic particularly Indian migrant workers living in the GCC. It highlights two main issues such as the Kafala system and wage theft. Such a system must be abolished to establish a safe environment for migrant workers. National and international bodies must investigate the issues of wage theft prevalent in the GCC for a long time, such unresolved issues have caused many migrant workers to experience mental health problems that have only escalated because of the consequences of COVID-19 pandemic. Therefore, the GCC must facilitate a sound system to eradicate wage theft, the Kafala system- seen as modern-day slavery and climate issues associated with their dependence on hydrocarbon industry. Therefore, it is only relevant that the GCC put their foot on the ground and take decisive actions against climate change.

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# SLIPPERY SLOPES IN VIRTUAL ENVIRONMENTS. TESTING AN EXPERIMENTAL DESIGN FOR SLANT ESTIMATIONS IN THE REAL WORLD AND 3-D COMPUTER GENERATED ENVIRONMENTS

Barnaby Pace

**ABSTRACT**

Over the last 70 years, there have been numerous studies undertaken in an attempt to explain slant perception and underestimation. Research has shown that the optical slant is being viewed at a lesser value than that of the geographical slant counterpart. In other words, there is a lack of correspondence between what is being perceived and what is actually being presented. In order to understand the problem fully a number of terms need to be explained, such as optical vs geographical slant. The optical slant is the slanted surface that is perceived by an individual, whereas the geographical slant is the physical slanted surface within a real environment. For example, the geographical slant for this paper is approximately 45°, if it is being held in a normal reading position, whereas the optical slant is 0° to the reader (based on an example in Gibson, 1950a). This phenomenon of slant underestimation has been shown repeatedly throughout the literature, a summary of which will be presented here. One of the more important findings is that as the geographical angle increases so too does the level of underestimation, as illustrated in Perrone (1981). This paper outlines an experimental design for testing slant perception estimations in the real world and computer generated environments.

**THE EARLY RESEARCH**

In the early 1950s Gibson and colleagues (Gibson, 1950a, 150b, Gibson & Cornsweet, 1952) conducted a number of experiments on the perception of slanted surfaces, partly in response to solving aviation problems encountered during World War II (Gibson, 1979). Although there had been previous research conducted on the perception of slants, it was Gibson's work that formed the foundation for numerous later experimental research projections. Gibson's 1950 experimental research provided definitions for determining what a visual surface was (Gibson, 1950b), and in doing so provided the necessary information for defining the qualities needed for a visual surface to be considered a slant, although this was later revised in his 1972 test. In addition to this was the concept of regular and irregular patterns in regard to slant perception, which provided the basis for his experimental hypothesis. This is the prediction that the "irregular texture would yield judgment of slant less consistent than the judgment obtained with the regular texture" (Gibson, 1950b, p. 377). Through this hypothesis, Gibson was able to determine a direct correspondence between the textual density and slant perceived, stating that "as the gradient of the density of texture of a projected image is increased by the experimenter, the slant of the surface perceived increasing correspondingly" (Gibson, 1950b, pp. 383). Further support for Gibson's 1950 hypothesis was given through his collaborative work with researcher J. Cornsweet. Although the 1952 hypothesis (Gibson & Cornsweet, 1952) was based on the concept of optical and geographical slants, it also incorporated the previously mentioned textual density and slant perception relationship. The results obtained tended to indicate absolute thresholds for the observer for both types of slants mentioned in their hypothesis, primarily optical and geographical.

The continuation of Gibson's research can be seen in the writing of Howard Flock. Flock's 1964 research on monocular slant perception primarily concentrates on motionless situations from both the point of the stimulus and the observer in order to lessen the effect of motion parallax as mentioned by Gibson (1950a, 1979). Flock (1964) described a slant as a collection of 'like elements', such as grass, which make up a visual surface or plane. Through this definition, he proposed an optical theta as a method for the calculation of slant angles. In addition to this Flock also proposed 2 postulates and 4 criteria in order to determine the quality and quantity of the 'like elements' in the slanted surface. As Freeman (1965) pointed out, a total of 13 criteria and assumptions are involved in Flock's psychophysical theory of the optical slant, thereby making the whole process very complicated. Flock's (1965) later work provided further evidence in support of the original findings, primarily in response to Freeman's (1965) writing, which strongly criticised the data and method given.

## COMPUTER GENERATED SLANTS

It was Braunstein (1968) who first started to use computerised images in order to test the previously mentioned theories of slant perception. The stimuli used were a number of motion-picture sequences projected on a translucent screen through the use of a motion projector showing 24 frames per second, The sequences were comprised of computer-generated images in the form of approximately 750 white dots with a black background, which had been translated into X and Y coordinated on the plane rotated around these axes. With the addition of a Z-axis, perpendicular to the line of sight, a three-dimensional effect was achieved. Prior to this, Braunstein (1966) had used a similar method in order to test depth perception. Braunstein (1968) concluded that textual gradients appear to be insufficient as a source of slant information (Perrone, 1981). In addition to this, the data showed large amounts of underestimations compared to similar studies (Perrone, 1981).

Braunstein and Payne (1969) continued with the concepts and ideas mentioned in Braunstein's 1968 work using similar computer-generated images as stimuli. This time three experiments were carried out. Experiment one consisted of images of computer-generated slanted surfaces of regular patterns projected in a similar manner to those in Braunstein's 1968 work. Here the subjects were presented with two stimuli slants at once, one being present in either eye. They were then asked to indicate which of the two had the greater slant. In addition to this, the participants were to show the greatest degree of slant presented to them by tilting a demonstration plane. Experiment two contained computer-generated line images rather than dots as in experiment one. Experiment three consisted of irregular dotted patterns in order to test different types of texture on the perception of slanted surfaces, as had been suggested by Gibson (1950b).

The continuation of computer-generated stimuli can be seen in the computer simulation produced by Clocksin (1980). Clocksin devised a computer simulation that used an optical flow pattern as discussed by Gibson (1979) to detect slanted surfaces. The simulation uses a number of equations as well as additional information to produce a slant value for each of the receptors in the visual field that have been activated as its output. Once this has been achieved additional calculations can be performed to determine information such as the absolute surface slant and degree of slant. This can then be compared with the results obtained from participants for further analysis. An example of this shows the levels of inaccuracy given by both the computer program and human participants. It should be noted that this simulation is also able to perform similar tasks with edge perception.

## SLANT UNDERESTIMATION

One of the common findings in the research on slant perception is underestimation by the participants as seen in the work by Braunstein (1968). Perrone (1980) proposed a mathematical model for the estimation of slant perception, as a part of his Ph.D. thesis (Perron, 1980). This model contains two options in order to allow for variation in the information presented in the visual field, such as the orientation of the surface regarding the direction of the true perpendicular and the surface plane. The model has been tested against Gibson's (1950b) findings, showing that the predicted result obtained for a backward slant using the model's

second option matches closely to those shown in Gibson's data, provided that we take the equation $y = x - v$ where $v = 12°$, into consideration. Similarly, the results for the forward slant are of equal comparison, with the aid of the   equation.  Perrone also compared the model against Smith's (1959) data in order to test for generality. This comparison produced similar findings between the model and data already obtained. The only difference between the model/Gibson and the model/Smith comparison was that in Smith's case the second option was expected to have either $a$ or $ø$ as estimates due to the fact that the slants shown did not fill the entire field of view.

Perrone's (1982) later writing provided a critical evaluation of his previous work and proposed a modified version of the model mentioned above. Perrone's (1982) general model contains two proposals based on the correct assessment of the true straight-ahead direction and the perceived straight-ahead direction. The two important parameters to be taken into consideration in the model are firstly, the projected length of the image and secondly, the angle of convergence of the sides of the image in question (Perrone & Wenderoth, 1991). The model stated that if the true straight-ahead direction is used in the calculation of the slant, then underestimations will occur due to the fact that only half of the visual surface is being taken into consideration, whereas if the perceived straight-ahead direction is used then the whole visual surface will be calculated, therefore producing more accurate results. In addition, Perrone (1981) also comments on the use of different apertures (circular and rectangular) in the presentation of slant surfaces, stating that different calculations need to be taken into consideration depending on the aperture used. An example of this is that the slant of the circle is more accurately perceived than the slant of rectangles (pp. 11). Once again, the model was tested against a number of previous studies (Gibson, 1950b, Smith, 1959), producing favourable results.

## FURTHER RESEARCH

Research in this area has continued to develop. Johansson and Börjesson (1989) proposed the development of a new theory for visual space perceptions, which at the base level takes into consideration wide-angle recording of slanted surfaces. The theory is to form three-dimensional metrical specifications for visual slant information with the use of information from the optical flow patterns, similar to the concepts mentioned by Smith and Snowden (1994) in their text. The authors claim that their "theory is capable of explaining real-life slant perception" (Johansson & Börjesson, 1989, pp.249), as well as the assumption that their model's processor is consistent with neurophysiological capability. The conclusion drawn by Johansson and Börjesson, after conducting three experiments to test their model are: firstly, that the visual system is sensitive to wide-angle optical flow information, and secondly that their model is in accordance with these findings. Later Börjesson (1994) worked independently on the optic sphere theory as a method for determining slanted surfaces. The method behind the theory involves the "extrapolation of the projected arc to a great circle on the optic sphere" (Börjesson, 1994, pp.267), this is then compared to the point of no change in order to make the slant judgment.

Buckley, Frisby, and Blake (1996) proposed an Ideal Observer theory, an ideal observer being a "theoretical perfect observer whose sensory and perceptual system works without error" (Reber, 1995, pp. 354) in order to solve the problem of poor slant perception. The authors used binocular viewing methods rather than monocular viewing due to better performance, which matches Perrone's statement that "Binocular viewing led to more accurate estimates of slant than did monocular viewing" (1981, pp.1 0). Buckley, Frisby, and Blake's findings showed a failure in the effect of density on the perception of a slanted surface, concluding that compression of the textured surface itself influences the judgments made. Compression has been stated as the ratio of width to length of each individual element contained on the slanted surface.

Pierce and Howard's (1997) research tested the perception of a textured surface in regard to the disparity of the horizontal, vertical, and overall size, plus the interactions between various types of patterns. The findings from these two experiments showed that for the horizontal size disparity condition (even though the full visual field surface was given) the predicted values for the levels of disparity were 2%, and that

underestimation of disparities were 4% and 8% for the 10° and 20° stimuli. Similar results were also achieved for the half visual field surface. The researchers concluded that these results may be due to the conflict between disparity and other visual information such as distance cues. Vertical size disparity contained slant information opposite to that of the horizontal size disparity. Finally, for overall size disparity, the full visual field surface appears as a lesser version of the horizontal size disparity, therefore the conclusion is that horizontal size disparity provides most of the information used by the observer in the perception of slanted surfaces.

Andersen, Braunstein, and Saidpour (1998) took Braunstein's earlier work (1966, 1968, Braunstein & Payne, 1969) one step further into a more realistic three-dimensional environment. Andersen and his colleagues performed five experiments on both depth and slant perception in a three-dimensional environment specified by texture. The first experiment was primarily concerned with depth, with the other four being dedicated to slanted surfaces. Experiment Two investigated the judgment of a slant with two planes at either 40° or 80° comprising different line texture patterns. The mean results obtained showed judgments of 19.2° for the 40° condition and 56.2° for the 80° condition, thereby showing consistency with the previously mentioned results. Experiment Three was identical to Experiment Two but with only one plane being presented. The mean collected under this condition was a close match to that of Experiment Two, being 14.5° and 53.5° respectively. In experiment Four, the judgment with a simple plane oriented vertically was conducted in a similar manner to that of the previous two experiments, with the mean results of 12.0° and 48.4° being obtained. Finally, the fifth experiment involved two planes being oriented vertically. Under this condition, there is a slight increase in accuracy for the 40° slant from the previous experiment to 20.1°, whereas the 80° slant remains fairly similar to that in Experiment Four at 47.4°. One of the conclusions drawn by Andersen Braunstein, and Saidpour is that accuracy of a judgment is greater for surfaces close to the planes (slants of 80°) than for the slanted surfaces close to the frontal plane (40° slants) (Andersen, Braunstein & Saidpour, 1998, pp. 1087).

## THIS STUDY

The experimental research undertaken within this paper is a continuation of Braunstein and colleague's work on slant perception with the aid of computer-generated images taking into consideration the foundation research conducted by Gibson (1950a, 1950b, Gibson & Cornsweet, 1952) and the research findings on underestimation as shown by Perrone (1980, 1981, 1982). The experiment to be outlined in this study involves the estimation of naturally occurring slanted surfaces by observers, similar to the slanted surfaces used in Bhalla and Proffitt's 1999 work. The collected data isl then compared with the findings of previous research as outlined above.

Braunstein's work (1968, Braunstein & Payne, 1969) used regular and irregular patterns of dots which, although they can represent depth and texture cues are not an accurate representation of real-world environments, partly due to the limitations of the technology available to him. His later work with Andersen and Saidpour (Andersen, Braunstein & Saidpour, 1998) integrated slightly more realistic computer-generated images in the form of wooden floorboards, but was still not a true representation of the natural environment in which the observers function. The aim of the present research is to allow for a comparison between the perception of computer-generated slants and those found in the real world. The purpose of this is to test for the degree of correlation between the two environments (real and computer-generated) in order to ensure that simulated programmes, such as those used by pilots, are an accurate representation of the real environment in which we function. If the findings fail to show a significant level of correlation between the two, then further research will be needed in order to isolate the necessary elements for the simulations to be more realistic. Such elements may include the quality of the display on which the stimuli are presented, taking into consideration things such as resolution, levels of colour hues, and brightness.

## METHODOLOGY

### Hypothesis

Drawing on the literature the following hypothesis is to be tested: there will be a significant level of correlation between the underestimations made by participants in the computer-generated environment and over-estimations made in the real world. If this hypothesis is true, then it can be stated that computer-generated environments are accurate representations of the real world. If the hypothesis is rejected then the reverse statement can be made, that computer-generated environments are poor representations of the real world and therefore caution is needed when using such stimuli in training equipment such as flight simulators.

### Subjects

Six volunteer participants included 5 males and 1 female ranging between 20 and 22 years of age.

### Stimulus

Four external, real-world, slanted surfaces located on the University of Waikato campus were used as the stimulus for this experiment. Two surfaces slanted at 11°, one at 4°, and one at 18° (Note that a ±1° margin of error is to be taken into consideration. This is due to the inconsistencies found in naturally occurring surfaces.) (Figure 1) The calculation of the slanted surfaces is given under Procedure.

Figure 1 – Stimulus one - 11° (top left), Stimulus two - 4° (top right), Stimulus three - 18° (bottom left), Stimulus four - 11° (bottom right).

## Apparatus

The participants viewed the stimulus binocularly through a circular shaped aperture (diameter of 20cm, a circumference of 62.83cm (2.d.p.)) constructed from cardboard. This was utilised in order to remove depth cues, such as horizon line) which could be used in the determination of the degree of slant by the observer, viewing angle is therefore 14.9°. A chair was provided in order to minimise body and head movement, thereby reducing the effects of motion on the perception of the slanted surface.

A tilt pad, similar to that described in Bhalla and Proffitt's 1999 research, ranging from 0 to 45 degrees was used to record the degree of slant perceived by the observer in both phases of the experiment. The tilt pad operates on a pivot system, allowing the user to move the pad backward and forwards 45 degrees, although for this experiment only the backward 45 degrees were needed as all slanted surfaces presented were of a forward-slanting nature.

## Procedure

Four slanted surfaces located on the grounds of the University of Waikato with the degree of slant measured using 0° as ground level as used in Bhalla and Proffitt's (1999) experiment. In order to increase the accuracy of the degree of surface slants, nine measurements (X1- X9) were taken in a 3x3 matrix with a pre-set distance (d) between each. The mean of the measurements was used to provide the slant of the surface being measured. This process was then repeated by a second individual to order to ensure the reliability of the original calculations.

Participants were seated by the researcher to view the stimulus. The chair was positioned on a flat surface (0° to 1°) either on concrete or hard soil. Once the participants were in position the researcher instructed them to look through the circular aperture at the stimulus. The participants were asked by the researcher to manually adjust the tilt pad (which was attached to the chair) in order to indicate the degree of slant being presented to them as they perceived it. The title pad allowed the participants to provide a non-verbal indication of the perceived degree of slant. Once the participant removed their hand from the tilt pad, the degree of slant indicated was recorded.

Once the experimental data was collected from all participants, the mean degree of misestimation, if any, was calculated. Once these calculations had been undertaken, comparisons between the data collected in previous findings, such as those commented on in Bhalla and Proffitt's (1999) research, were checked for consistency. In order to test the hypothesis, the results obtained within this study were compared to findings of previous research which used computer-generated images such as Braunstein's 1968 and 1969 works.

## RESULTS

The results obtained indicate the same trend as shown by Braunstein and colleagues (Braunstein, 1968; Braunstein & Payne, 1969; Andersen, Braunstein & Saidpour, 1998), and as such provides support for the hypothesis that there is a strong relationship between the underestimations made by participants with computer-generated slanted surfaces and the overestimations made in the real world.

The mean results show an overestimation of 12.6° for the first stimuli (11°) with a mean of 23.6°. Stimulus two (4°) produced an overestimation level of 5° from a mean of 9°. The third stimulus showed a mean estimate of 31.3° with an overestimation of 13.3°. The fourth stimulus (11°) showed an overestimation of 6.8° from the perceived mean of 17.8°. Stimulus one and four (both 11°) fail to show a correlation in overestimation which will be examined in the discussion sections.

**Table 1. Mean results for participants' responses to slanted surfaces and degree of misestimation**

| STIMULUS | MEAN (DEGREES) | DEGREE OF MISESTIMATION (±) | |
|---|---|---|---|
| Stimulus 1 - 11° | 23.6° | +12.6° | Overestimation |
| Stimulus 2 - 4° | 9° | +5° | Overestimation |
| Stimulus 3 -18° | 31.3° | +13.3° | Overestimation |
| Stimulus 4 - 11° | 17.8° | +6.8° | Overestimation |

Comparison between Proffitt's 1995 findings and those in this experiment indicate a similar trend although being just outside the pre-set margin of error (Table 2). The variation in overestimation levels for a surface of the same slant could be influenced by a number of environmental variables that are explored within the discussion. Due to the nature of the slanted surfaces portrayed in the computer-generated environments a clear comparison cannot be drawn between those found in Braunstein and colleagues (Braunstein, 1968; Braunstein & Payne, 1969; Andersen, Braunstein & Saidpour, 1998) and those shown in this study. Therefore, the hypothesis can only be supported by the trends shown and not by the degree of correlation between all the sets of data involved.

**Table 2. Comparison to Proffitt's 1995 Findings**

| STIMULI | CURRENT FINDINGS (° DIFFERENCE) | PROFFITT (1995) |
|---|---|---|
| 4° (Stimulus 4) | 9° (+5°) | 7.7° (+3.7°) |

## DISCUSSION

The aim of this pilot study was to test the hypothesis and demonstrate a correlation between the misperception made of slanted surfaces found in both the real work and those generated in computer virtual environments, such as can be in found in flight and driving simulators. Although this experiment provided further evidence in support of Proffitt's (1995) findings, it did not give adequate evidence to support the aim of due to the nature of slanted surfaces found in computer-generated environments. The smallest slant given in computer-generated environments 20° (Andersen et al., 1999) and the largest slant given in this study was 18°, due to the location. The steepest slope found on the University of Waikato campus grounds is 18°. Gibson's 1950b experiment did provide a 10° slant that could be used as another comparison for the two 11° surfaces, as it is then in the margin of error ±1°, although this stimulus itself is not computer-generated. An ideal experimental comparison would therefore use computer-generated surfaces to match those being used in the real world. This would allow the researcher to test for variables such as the impact the monitor (resolution, brightness and depth (3-D soft and hardware)) has on the perception of the slants being portrayed. As well as the mismatch of surface slant a number of other variables need to be reviewed, such as the texture of the is being viewed.

The texture of the surface being perceived is another important consideration. Variables, such as the length of the grass in the areas being viewed need to be taken into consideration when analysing the data from different slants. An example of this can be seen in stimuli three and four (Figures 1c and 1d). On viewing we are able to see that the grass in both stimuli three and four is uneven (irregular) in nature as compared to stimuli one and two, therefore giving the observer misleading information in regards to the density of the surface's texture. The time of day and shadow pattern produced also gave the observer misleading information on the textural density of the surface. As stimulus four (11°) the shadow laying at the top of the

slanted surface produces the impression of a flatter surface that is actually present, which may explain why the observers perceived this slant at a lesser angle when compared to stimulus one (11°). If this is the case, then general weather patterns and the amount of light present in viewing the stimulus will also need to be taken into consideration. In order to overcome this problem, experimental conditions need to be matched as closely as possible between participants in order to achieve interparticipant consistency.

As well as the large number of external variables which the experimental design, in this case, was unable to account for, a number of other experimental problems occurred. The first of these was the method by which the slant estimations were given by the observer. The tilt pad, as used in Proffitt's 1999 research, had a number of limitations. Firstly, the highest level of degree that can be shown is 45° and although the greatest slant given was only 18° the observer's perception of this slant, as shown in the data, ranges from 16° to 50°. This limitation forced the participants to give a verbal response as to the estimation of the slant being presented to them. In order to avoid this problem in future research, a number of modifications need to be made to the tilt pad. Firstly, by extending the height of the lag bracket between the base and the tilt pad to allow for greater movement, and secondly, extending outward the bracket to the 'protractor' is foxed, to avoid contact with other parts of the tilt pad frame.

In addition to this, the tilt pad also tended to produce results closer to the physical slant than previous research would suggest (Gibson, 1950b, Braunstein, 1968). Proffitt's (1995) and Bhalla and Proffitt's (1999) research indicated a similar trend, showing comparisons between the tactile and verbal responses. If, in fact, there is a relationship between the improved slant judgments and tactile responses this could prove to be a valuable aid for pilots when navigating at low levels, and an area for further research. In addition to the design faults in the tilt pad, the size of the aperture also needs to be re-calculated if the experiment is to be re-tested. In this experiment, the aperture had a circumference of 62.83cm which, in hindsight, was too small and thus restricting the field of view and removing a large portion of the textured surface. This restriction limited the amount of depth information the observer was able to acquire from the textured surface which, as Gibson (1950b) identified, is one of the key sources of depth information.

Taking the aforementioned factors into consideration, with the addition of computer-generated slanted surfaces matching the degree of the naturally occurring surfaces, the experiment could be re-run to produce favourable results based on the data trends shown in this experiment. In addition, this research has suggested several other issues which could also be addressed in future experiments, such as an investigation into whether the level of accuracy between tactile and verbal responses could prove valuable in several areas, particularly military applications. A study of the effects of shadowing on depth, as well as slant perception, would add to the understanding and comparison of both computer-generated and real-world situations. Gender differences, although unrelated to the hypothesis for this experiment, may produce interesting results taking into consideration differences in spatial abilities. Due to the limited sample size used in this experiment, no pattern to support such an idea was shown. Some of these issues show a higher level of real work and day-to-day implications than others. All of them, though, would add to the growing pool of knowledge about human perception of our environment and how we navigate within it.

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