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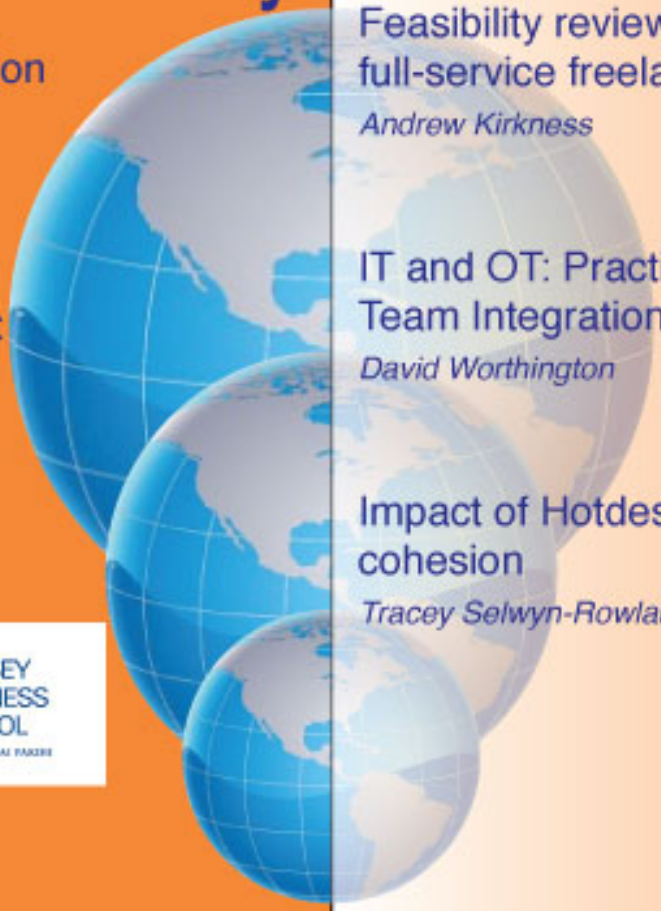

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Special Edition Foreword

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Welcome to the fourth special edition of the JAES:

Welcome to the fourth and final edition of the Journal of Asia Entrepreneurship and Sustainability series focusing on Applied Business Research papers undertaken by 2020 Executive MBA students from Massey Business School, Massey University, New Zealand. This edition examines specific work-place practices that affect organisational performance and individual wellbeing and effectiveness. The four papers demonstrate focused pieces of research, which investigate different workplace phenomena that have arisen due to the rapidly changing work environment, both within New Zealand and beyond.

As the business world becomes more fluid and subject to constant innovation and change, the consequences of these changes affect the people who work in our organisations and upon whom the pressure to adapt and increase productivity and effectiveness mounts. One positive outcome from the Covid-19 pandemic might be that we are all now much more familiar with the concept

of 'pivoting' – accepting and adapting to changes, often with little warning, to our established ways of doing things. For organisations to thrive in this new environment, a sound understanding of the practices and processes which will enable their workforces to perform at their best, and an acknowledgement that they require constant appraisal to keep pace with requirements, is essential. The first paper in this edition investigates the impact of our new technological age on an enduring and unfortunate workplace practice – bullying. In her research, Kim Scott investigates the new dimensions of bullying available to perpetrators via cyberbullying. In her paper, entitled 'Exploring experiences of cyberbullying in the New Zealand workplace – a victim's perspective', she points out that cyberbullying can be more severe than traditional bullying due to the anonymity of the perpetrator and the physical distance between the individuals. Mobile phones, email, websites, and social media enable bullying to move beyond the time and space of normal workplace activities, and can have an enormous detrimental effect on an organisation's culture and performance. A key finding from her report is that all the research participants felt that the organisation was the most significant influencer in dealing with cyberbullying.

The second paper, by Andrew Kirkness, looks at an opportunity available to a start-up entrepreneur to employ a new business model within a New Zealand operation dependent upon international connections. His report, entitled ' Feasibility review of a start-up full service freelance ICT firm in New Zealand', focuses on screening talent and projects with high-quality, hands-on

consulting and project management services, in the Information Communication Technology (ICT) sector. The main challenge identified is that leading New Zealand domestic freelance service providers are amongst the most expensive in the world, and also lack effective quality control measures. Global freelance providers are more competitively priced but also lack quality controls and are usually unfamiliar with the New Zealand market. The research investigates the feasibility of a start-up full service ICT firm targeting SMEs (small and medium sized enterprises) in New Zealand. The proposal uses international freelancers managed by a certified Project Management Professional in New Zealand, enabling the delivery of high quality and low cost to clients.

In the third paper, David Worthington investigates 'IT and OT practices that influence team integration apprenticeships'. As internet-connected technology is a rapidly growing business sector, technology is crossing previous organisational boundaries. It is now possible for your mobile phone to talk to your refrigerator, and to make this happen, it is necessary for Information Technology (IT) Teams and Operations Teams (OT) to also talk to each other. This research looks at the need for specialist new teams comprising people from diverse IT and OT backgrounds. Tensions are created from a lack of confidence in the ability of Information Technology integration to meet and address the goals of Operations Technology stakeholders. Worthington identifies five key themes that influence the integration of IT and OT – either

to inhibit or encourage it. He then suggests strategies to support future integration initiatives.

The fourth and final paper in this edition is by Tracey Selwyn-Rowland, entitled ‘Impact of hotdesking on team cohesion’. Hotdesking, whereby office staff do not have a personal desk, but take an available desk whenever they are at work, has been around for a while. It is now a much more urgent topic to consider as many organisations are looking to benefit from the new, Covid-led ‘Working from Home’ phenomenon, and downsize their physical office space, profiting from the potential associated financial benefits. This study is timely in that it investigates important issues relating to team and therefore organisational performance, as a consequence of the hotdesking experience. Tracey’s research found that team bonding is hindered by the inability to co-locate with team members’ own teams. Hotdesking does benefit team members if they can sit with different team members at different times, but not with the wider business network. A lack of desks is a key barrier to hotdesking success, with a feeling of marginalisation coming from a lack of provision for employees. The key finding is that project teams need to co-locate in order to have cohesion and work collaboratively.

Journal of Asia Entrepreneurship and Sustainability

These final four papers in the Massey EMBA research series demonstrate the applicability of practical research to very current organisational issues. We hope you enjoy reading them, and that the benefits of research carried out by practising managers on MBA programmes are apparent and useful.

The Special Edition Editors
Patricia Bossons, F. Elizabeth Gray, Trish Bradbury

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Exploring experiences of cyberbullying in the New Zealand workplace: A victim's perspective

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Abstract

While cyberbullying in younger generations is the subject of much research, cyberbullying in the workplace still requires considerable investigation (Forssell, 2016). As limited research has been published in this area, this exploratory study delves into experiences of cyberbullying in the New Zealand (NZ) workplace from the victim's perspective, specifically, to identify how such factors can influence the experience and the resolution of this behaviour. The research strategy adopted is qualitative using a post-positivist approach, focused on workplace cyberbullying experiences within the last five years. Data collection involved semi-structured interviews, which was then subjected to thematic analysis in order to identify potential themes.

Through this thematic coding process, eleven main themes emerged. Themes included individual factors such as the victim's personality, demographics, and confidence levels. The perpetrators personality, a lack of management competencies and their ability to cope with pressure. Organisational factors including workplace culture, performance pressures and a lack of

organisational support, and although Societal factors were not found to be influential, poor industry culture and a lack of cultural sensitivity were deemed to be factors by some of the participants interviewed.

The study also shows that by and large individual and environmental factors that influence cyberbullying are the same as those that influence traditional forms of bullying. The findings therefore support claims that bullying, and cyberbullying may indeed be best studied together and considered as the same phenomenon.

Introduction

With the advent of information technology over the last forty years, bullying has evolved away from more traditional methods. These days there is a significant emphasis on communication via electronic means rather than face-to-face (Forssell, 2016), which has made way for the onset of workplace cyberbullying. Although extensive research has been conducted on the effects of cyberbullying in younger generations in a social context and in educational environments (Baruch, 2005; Coyne et al., 2017), there exists a gap in the research regarding the impact of cyberbullying and harassment of adults in the workplace (Lutgen-Sandvik & Tracy, 2012).

Vranjes, Baillien, Vandebosch, Erreygers, and De Witte (2017) define workplace cyberbullying as all negative acts which occur through technological means, differing from traditional face-to-face bullying in regard

to physical presence. Yet, often when individuals are cyberbullied, it is usually part of a broader experience of traditional bullying (Privitera & Campbell, 2009). For this reason, some researchers believe cyberbullying should be treated the same as traditional forms of bullying (Li, 2007) while others believe it should be treated differently, (Kowalski, Limber, & Agatston, 2012) as the outcomes can be far more severe due to the anonymity of the perpetrator and physical distance between individuals (Ford, 2013). Both can cause harm, however the balance of power in workplace cyberbullying can be tipped by an imbalance of technological prowess, through modalities such as phones, email, web sites and social media, (Privitera & Campbell, 2009), rather than just by formal power such as manager versus subordinate (Branch, Murray, & Ramsey, 2012), or physical aggression (Slonje & Smith, 2008). It is also important to remember that traditional bullying generally occurs within the confines of the organisation's daily activities, whereas cyberbullying extends beyond these boundaries and is not limited by time or distance (D'Cruz & Noronha, 2013).

Workplace cyberbullying affects individuals worldwide, spanning demographics such as gender, age and race (Yavuz, Yusuf Levent, & Bahadir, 2010). It can potentially affect any employee that cannot easily defend themselves against digital abuse by another (Smith et al., 2008). International academic research has also illustrated the link between workplace cyberbullying, employee dissatisfaction and performance (Coyne et al., 2017), absenteeism and staff turnover (Rayner, 1997), and stress-related issues

(Bentley et al., 2009), all of which can have a detrimental impact on the individual as well as a cost to the organisation (Kowalski et al., 2017). It can have a significant impact on workplace culture (Privitera & Campbell, 2009), organisational performance, increasing absenteeism rates, staff turnover, and productivity losses (Rayner, 1997), not to mention team performance (Coyne, Craig, & Smith-Lee Chong, 2004), and employee commitment (Bowling & Beehr, 2006).

While a range of studies indicate similarities in behaviours and consequences (Slonje, Smith, & Frisén, 2013) there are still gaps in our knowledge of how individual, organisational, and societal factors contribute to the overall experience of workplace cyberbullying. Whilst a number of factors have been found to contribute to traditional face-to-face bullying, the nature and means of cyberbullying differs and it is therefore important to understand the factors influence cyberbullying as a separate entity.

Therefore, this study, aims to explore experiences of cyberbullying in the NZ workplace from the victim's perspective, in order to better understand how individual, organisation and societal factors, contribute to workplace cyberbullying, specifically relating to (a) the individual (b) the perpetrator (c) organisational factors that may cultivate this behaviour and (d) any societal factors.

1.1 Research Question

How do individual, organisational, and societal factors, influence experiences of cyberbullying in the New Zealand workplace?

2. Literature Review

2.1 Traditional Bullying

Although as far back as the 1880's aggressive behaviour in the workplace has been documented (Levy, 1983), extensive research concerning traditional face-to-face bullying only really began four decades ago with traditional bullying originally regarded as more of a childhood issue than one in adulthood (Randall, 2001). Originally known as "mobbing," the first major studies into the phenomenon only began in the early 1980's (Leymann & Gustavsson, 1984).

2.1.1 Defining workplace bullying

Extensive research has been conducted since this time with varying definitions of workplace bullying proposed. Although not universal, they have consistent themes; an imbalance of power (Slonje et al., 2013), aggressive behaviour (Slonje & Smith, 2008) and repetition over time (Olweus, 1993). These negative behaviours can be both emotional and psychological in nature (Keashly, 2001) and aim to humiliate or intimidate another (Leymann, 1996). The following definition of workplace bullying by Einarsen, Hoel, Zapf, and Cooper (2003, p. 15) is widely recognised today:

'Bullying at work means harassing, offending, socially excluding someone, or negatively affecting someone's work tasks. In order for the label bullying (or mobbing) to be applied to a particular activity, interaction, or process, it has to occur repeatedly and regularly (e.g., weekly) and over a period of time (e.g., about six months)'.

Agervold further explained, the rationale for this frequency and duration thresholds as, 'to differentiate bullying from personal conflicts of a more episodic character' Agervold (2007, p. 165).

2.1.2 Bullying behaviours

'Bullying may be work related or person related, and enacted either overtly or covertly' (Catley et al., 2013, p. 599). These behaviours include; micro managing, excessive workloads with unrealistic deadlines, unfair criticism and intimidation (Einarsen et al., 2011), verbal abuse (Keashly & Jagatic, 2011), social isolation and unsubstantiated gossip (Einarsen, Hoel, & Notelaers, 2009), being asked to do work below your level of competence (Einarsen et al., 2009), as well as physical violence (Keashly, 2001). Rayner and Cooper (2006) also include the withholding of task-related information, such as emails and meeting times, as a form of traditional workplace bullying. The most comprehensive list of bullying behaviours, are those used in the Negative Acts Questionnaire - Revised (NAQ-R) developed by Einarsen et al. (2009) which is the most commonly used tool for measuring bullying.

2.1.3 Influencing factors

Several studies have shown support towards psychosocial behaviours as influencing factors (Francioli et al., 2016), related to the way workplace bullying is experienced. It has been suggested that individual factors such as low self-esteem (Fanti & Henrich, 2015), social competency (Zapf & Einarsen, 2011), job pressure (Agervold & Mikkelsen, 2004) and position (Howard, Johnston, Wech, & Stout, 2016) can contribute to situations such as workplace bullying, which effects an individual's ability to perform (Einarsen et al., 2003). Research also suggests that some individuals with low self-assertiveness (Zapf & Einarsen, 2011) and submissive tendencies are more likely to allow the bullying to continue without reporting it (Porath, 2013). Hauge et al. (2011) further suggest additional factors such as gender could be influential, yet this is disputed in other literature such as Bentley et al. (2009), who suggest that gender did not influence the prevalence of bullying in the NZ workplace. Their study did, however, indicate some ethnic bias surrounding minorities.

In previous research, bullying has been viewed as interpersonal rather than organisational (Einarsen et al., 2011), yet ongoing research in this area is slowing changing this point of view (D'Cruz & Noronha, 2013). A study conducted by Agervold and Mikkelsen (2004) investigated the relationship between the victim and the organisational environment, found that a lack of supportive leadership and certain management styles may have been the main contributor to higher levels of bullying, rather than the environment itself, whereas other studies differed. Poorly organised workplaces (Leymann, 1996),

organisational culture (Agervold, 2007), organisational change (Salin & Hoel, 2011), and differing societal values (Lutgen-Sandvik & Tracy, 2012) were cited as the main contributing factors.

2.2 Cyberbullying

With the advent of technology, a new form of e-harassment has emerged, extending bullying beyond face-to-face. Now days, there is a growing reliance by organisations on information, communication technologies and devices (ICTDs) in order to gain a competitive advantage, increase efficiency and boost productivity (D'Cruz & Noronha, 2013). Given this reliance, it is inevitable that there would be some misuse, which could produce negative consequences at both an individual and organisational level (D'Cruz & Noronha, 2013).

2.2.1 Defining workplace cyberbullying

Cyberbullying has no one clear definition, but several definitions have similar themes. A systematic review of cyberbullying by Lee (2004) identified six main components of cyberbullying behaviours that were common across the literature reviewed: intention to harm another, hurt, repetition, duration over time, power struggle, and provocation. Cyberbullying is defined by Privitera and Campbell (2009, p. 397) as ‘a situation where over time, an individual is repeatedly subjected to perceived negative acts conducted through digital channels, such as phone, email, web sites and social media, which are related to their work context’. Whereas, Slonje and Smith (2008, p. 147), Smith defined cyberbullying more specifically as aggression that ‘occurs through

modern technological devices, specifically mobile phones or the internet'. These definitions show that cyberbullying is defined in the same way as traditional face-to-face bullying, but through cyber means.

Although the channel through which bullying behaviours are exhibited is the key theoretical difference, several studies show that cyberbullying occurs simultaneously with traditional bullying (Gradinger, Strohmeier, & Spiel, 2010; Privitera & Campbell, 2009) with some researchers believing cyberbullying to be merely an extension of more traditional methods (Li, 2007). It is important, nevertheless, to remember that traditional workplace bullying is generally contained within the organisation, whereas the online nature of cyberbullying enables it to extend beyond traditional organisational boundaries and traditional work hours (D'Cruz & Noronha, 2013).

2.2.2 Behaviours

Although similar to traditional workplace bullying, the medium differs for cyberbullying (Kowalski et al., 2017) as does its characteristics (Slonje & Smith, 2008). This difference has important implications on the way people behave and their outcomes are experienced (Giumetti, McKibben, Hatfield, Schroeder, & Kowalski, 2012). Most traditional workplace bullying occurs during the work day; however, cyberbullying can occur at any time and in some cases, the distance of cyberspace between individuals can provide a protective layer for the perpetrator, reducing empathy and the awareness of the impact (Slonje & Smith, 2008).

In cyberbullying situations, the person being targeted can have difficulty defending themselves against the act (Farley et al., 2016). Examples of workplace cyberbullying include: threats, spreading rumours, making unreasonable work demands and drawing attention to mistakes in a public manner (Grigg, 2010). It can also include unfair criticism, being blamed for others mistakes, rude or aggressively worded messages, unauthorised release of personal information and having your competency unfairly questioned (Farley et al., 2016). It is important to note that exclusion can be just as damaging as inclusion (Farley et al., 2016). Omitting co-workers from relevant email correspondence, meeting invites, or including non-related staff into correspondence to make the individual look bad are examples of this. This concurs with Rayner and Cooper (2006) whose view on traditional workplace bullying includes the withholding of task-related information and meeting invitations, which adds weight to the idea that bullying and cyberbullying coexist under one general heading of workplace bullying.

There are a number of ways to measure workplace cyberbullying, one of these being The Workplace Cyberbullying Method (WCM) developed by Farley et al. (2016), which builds on the work done by Einarsen et al. (2009) but specifically focuses on cyberbullying behaviours. It incorporates modalities of text, phone, email, instant messaging, social media, video software and general websites. The latent class cluster approach by Notelaers, De Witte, Einarsen, and Vermunt (2006), is also noteworthy as it measures the exposure of cyberbullying at work and suggests, the severity and impact of workplace

cyberbullying can be higher or lower, depending on the model and methodology chosen (Galanaki & Papalexandris, 2013).

2.2.3 Influencing factors

Although not dissimilar to traditional face-to-face bullying in nature and outcomes (Kowalski et al., 2017), employees may feel a detachment when communicating electronically leading to a sense of anonymity in relation to acts of workplace cyberbullying (Borstorff, Graham, & Marker, 2007). For this reason some believe its outcomes are far more severe than traditional bullying methods, due to the anonymity of the perpetrator and physical distance between individuals (Ford, 2013). Other research studies have identified specific factors such as work exhaustion and frustration over workloads (Blau & Andersson, 2005), suggesting that many factors can contribute to the way cyberbullying is both initiated and experienced.

Although limited research exists on how some factors influence these experiences, certain researchers have investigated; demographic bias or cross-cultural differences, personality traits, certain personalities which are more prone to exhibit cyberbullying tendencies than others (Madan, 2014), and personalities that are more likely to quietly accept the behaviour (Porath, 2013). This includes individuals with low levels of social competence and self-assertiveness (Zapf & Einarsen, 2011), and those with submissive tendencies (Coyne, Seigne, & Randall, 2000). This does not, however, exclude dominant personality types or high achievers (Kim & Glomb, 2010).

In other studies conducted by Gardner et al. (2016) it was suggested that, as has been found with traditional face-to-face bullying, the work environment contributed to workplace cyberbullying. Gardner et al. (2016) found that limited organisational support and ineffective organisational strategies were associated with increased cyberbullying behaviours. This was attributed to an unhealthy working environment, poor organisational systems, and poor processes. Without adequate support structures, bullied employees felt there was no point in addressing the issue and resigned themselves into submission (Lutgen-Sandvik & Tracy, 2012).

2.3 The Current Research

Some studies suggest that factors influencing cyberbullying are the same as those influencing traditional bullying, which would indicate that a range of individual and organisational factors such as aggressive nature (Slonje & Smith, 2008), a toxic work environment and limited organisational support (Gardner et al., 2016) influence cyberbullying. Others believe that cyberbullying is a distinct phenomenon (D'Cruz & Noronha, 2013) and that by identifying indicators, policies and guidelines can be established around acceptable practice, decreasing the threat of exposure and separating the behaviour from traditional methods of bullying (Farley et al., 2015).

This research, therefore, aims to explore experiences of workplace cyberbullying in the NZ workplace and delve into how differing factors can influence this experience.

3: Methods

3.1 Research Design / Framework

This research takes a post-positivist approach with an emphasis on exploring the phenomenon of cyberbullying and how it is experienced from the victim's perspective.

This includes participants beliefs, feeling and attitudes towards their own role in the experience, the cyberbully, factors within the organisation and externally.

For this research the Ecological Systems Theory (EST) was used, based on Bronfenbrenner's ecological framework (Bronfenbrenner, 1979) using semi-structured interviews for data collection, to allow participants to speak freely (Clough & Nutbrown, 2012). The interview schedule consisted of questions around demographics and secondly, perceived factors that influenced participant's experiences relating to individual, organisational, and societal factors. A pilot interview was then conducted to ensure that questions were clear, and adequate data collection could be achieved to answer the research question (van Teijlingen & Hundley, 2001).

3.2 Data Collection

Participants were selected from the NZ working population, using purposive sampling (Bryman & Bell, 2015), A predetermined criteria was also used (Guest, Bunce, & Johnson, 2006) and an imposed time frame to ensure clarity when participants recalled events (Flanagan, 1954). Thirteen participants took part in the study, which was considered to be a sufficient number as no new themes emerged towards the end of the interviews. Guest et al. (2006) identified that data saturation is generally reached by 12 participants, and this was also the experience of this research.

Interviews were held using varous methods. This proved useful as some respondents preferred the telephone and skype mode of interviewing as it gave them virtual anonymity, reducing stress levels (Fenig, Levav, Kohn, & Yelin, 1993). Interviews conducted by Sturges and Hanrahan (2004) support this approach as they found no significant differences in the data collected between telephone or face-to-face, and therefore unlikely to compromise any data. Participants ranged in age from 20 to 60 years, with 11 out of 13 participants being female and 8 of the 13 participants holding senior positions. Consultation was sort regarding cultural issues with an ethics approval granted prior to commencement, and pseudonyms being used throughout the study to protect their identities.

3.3 Data Analysis

Thematic analysis (Braun & Clarke, 2006) was chosen for this study, to draw out themes in the data which had a significant impact on the experiences of cyberbullying in the NZ workplace over those less significant. Once collected, coding involved an iterative process selecting sections which related to different factors (individual, organisational, and societal) based on the EST framework (Bronfenbrenner, 1979).

4. Results

4.1 Summary of Experiences

Thirteen participants were interviewed who felt they had experienced workplace cyberbullying within the last five years. Participants were employed in a range of industries and out of the 13 participants interviewed, 11 were female and two were male. Cyberbullying experiences varied in levels of severity, and ranged from five months to nine years in length, with the longest case still unresolved

Using the WCM developed by Farley et al. (2016) as a guide, the above cyberbullying behaviours were identified across the participants. These ranged from condescending emails (n=7), aggressively worded or abusive emails and texts (n=10) unwarranted performance management threats (n=4), unfair work-related criticism (n=3), messages with sexual connotations (n=2), humiliation in front of others (n=5), gossip spread about them (n=2), unfair personal criticism (n=3) and emails questioning their competence (n=6). Exclusion from

important correspondence (n=3) and from meeting invites (n=1) to make the participant miss meetings and look poorly to others, were also note-worthy.

Nine participants were cyberbullied by their direct line manager, one by their indirect manager, one by a colleague, one by a direct report and one by an external source. Four perpetrators bullied other staff members as well as the participant and in all but three of the 13 cases, other people either witnessed the behaviour or were aware of it and did not act. All participants felt it difficult to defend themselves against the cyberbullying and felt that harm was intended. They also recognised that these cyberbullying behaviours were incredibly detrimental to their wellbeing which left them feeling worn down (P01, P10), intimidated (P02, P03), powerless (P06, P08, P11) and stressed (P09, P13), which in turn affected some of the participants work performance (P05, P09) and personal lives (P09, P11).

P05 described her experience as humiliating and publicly embarrassing, stating that she started to question her own ability, which caused her job performance to suffer. P08's would receive abusive text messages and emails at all hours berating him. And participant P11 would receive continuous threats to have her removed from her position for poor performance, when she felt the issues occurring were not due to her incompetence, but a lack of management.

Participants took a range of steps to try and resolve their cyberbullying experience. In eight cases the participants approached either the perpetrator

directly, Human Resources (HR) or senior management. Although some were supportive, only one of these was resolved with HR intervention, with many being told that HR worked for the company first, not the employee. The five other participants took no action as they did not feel their voice would be heard. The level of emotional distress felt by the participants influenced whether victims complained, submitted, or resigned. Only two of the 13 instances reported by participants were ever resolved (P05, P13). Of these, one was resolved through a confidential settlement between parties (P13) and one went to mediation, however the resolution conditions were never enforced (P05). Seven participants either resigned or transferred to escape the behaviour as they felt they had no other option, and four cases ceased when the perpetrator resigned.

Although individual experiences varied, several themes emerged, all participants felt that the organisation itself was the most significant influencer, followed by the perpetrator, themselves as an individual and to a lesser extent, societal factors.

4.2. Individual

Participants identified a range of factors as victims of workplace cyberbullying that they felt influenced their experience. The key themes that emerged regarding the victims were personality traits, confidence levels and demographics. Although there may be some overlap between personality traits and confidence levels these have been discussed separately, as traits are

distinguishing characteristics that embody the individual, whereas the confidence levels described were specifically around their belief in the ability to cope or confront the perpetrator.

4.2.1 Personality traits

Twelve of the 13 participants felt that their personality contributed to their experience of workplace cyberbullying. Specifically, seven of the participants felt that they had a soft or introverted personality and that the perpetrator took advantage of that. Alternatively, five participants suggested that their personality was more dominant than the perpetrators and that this had impacted on their experience. For example, P03 and P12 said it enraged the perpetrator when they were challenged and inflamed the situation. P03 would stand up for herself then find that she was being micro-managed for the next month in retaliation. P12 was repeatedly told she was incompetent, undermined in public correspondence and browbeaten when she would challenge the perpetrator's requests. Interestingly, even participants with more dominant personalities felt they lost confidence over time, as the cyberbullying increased in frequency and/or severity.

4.2.2 Confidence Levels

An aversion to conflict due to a lack of confidence was indicated by six of the 13 participants as an influencing factor. Participants preferred avoidance rather than challenging authority, thus accepting the behaviour, and allowing it to continue. This then became the status quo and the behaviour continued as if it

was accepted due to a lack of repercussions, in some cases for several years (P10, P13). P13 acknowledged that his lack of confidence and aversion to conflict played a part in his experience: Alternatively, P03 and P12 felt that they are confident people and like to challenge authority, which impacted on their experience. This differed from the experiences above as they felt the cyberbullying escalated due to their ability to confront the perpetrator and only fuelled it, whereas the participants above did not mention the behaviour as escalating over time, only that it became 'the new normal'.

4.2.3 Demographics

Ethnicity was deemed to be an influencing factor by two of the four non-European participants who felt they were treated differently due to their ethnicity. For example, P04 felt the perpetrator treated the minority races in the organisation poorly, spoke down to them and was condescending in his emails if they were not European or Asian. P04 also believed that her ethnicity influenced her experience due to her own cultural beliefs. Two other participants (P07, P08) who received cyberbullying messages believed that their gender was an influencing factor. Because P07 and P08 rejected the advances of the perpetrator they felt the intensity of the cyberbullying increased and therefore, had a greater influence on their experience. Other demographics such as age and education were not considered to be influencing factor.

4.3 Perpetrator

Participants identified a broad range of factors associated with the perpetrator that influenced their cyberbullying experience, including negative personality traits, a lack of management competencies, cultural differences, personality types, pressure to perform, controlling tendencies, interpersonal relationships, and egos, to name a few. This resulted in three key themes emerging regarding the perpetrator; adverse personality traits, personality type and management competency.

4.3.1 Personality traits

Ten participants felt that the perpetrators personality traits influenced their experience in an adverse way. Seven of the 13 participants felt the perpetrator was introverted, five of which felt that they tried to act in an extroverted way which may have influenced their behaviour, especially around job pressures. Specifically, P08 and P11 felt that because their manager was generally quiet, unsociable and withdrawn as a person, but believed they needed to act in a more extroverted way to be heard, they did not know now to express themselves and therefore, behaved badly. For example, P04 believed that the perpetrator felt more comfortable behind the keyboard as he did not like the confrontation or knew how to address issues in person, therefore, would resort to cyberbullying when he got frustrated. Alternatively, five other participants felt that the perpetrator's extroverted personality contributed to their experience. They referred to the perpetrator as being outgoing (P10), loud (P03) and talkative (P06) who enjoys being the centre of attention (P10). P03

felt that because of his personality, her manager would seek attention and make issues in front of others to look good, which contributed to the severity of her cyberbullying experience.

P07, P10 and P12 cited narcissistic tendencies, while P13 explained that authoritarian personality traits were more influential. Of the participants who felt narcissistic personality traits were prominent they noted that the perpetrators were very self-assured, acted without shame and believed themselves to be untouchable. Participants used terms such as pompous (P10) and arrogant (P03) to describe the perpetrator, with all participants describing the perpetrator as both a bully and a cyberbully. P05 believed her indirect manager thought of himself as a 'demi god' and that she was not of any importance as she was not an academic, therefore he could treat her any way he liked, whereas P08 believed his manager has sociopathic tendencies and would lie and manipulate others to her own advantage.

4.3.2 Behavioural tendencies

Of the 13 participants interviewed, all felt that the perpetrators behavioural tendencies strongly influenced their experience. The manner they conducted themselves, their actions and their reactions to certain situations were 'over the top' and had a negative impact on the participant. P02, P08 and P09's manager exploded when they were under pressure and P08 would be on tender hooks every time a new email popped up in his inbox. P06 and P05 added to this, describing the perpetrator as having no filter and a false sense of self

entitlement, that they believed justified the behaviour, in their mind. Perpetrators used email and text messaging to exert control (P10, P12) and would abuse the power of their position (P07, P08). Perpetrators were ambitious (P04, P13) driven by their ego's (P03, P06, P10) and liked to belittle staff in front of others by making public statements in writing that cast them in a negative light.

4.3.3 Management competencies

Six participants of the 13 interviewed felt that a lack of management competencies, was a significant factor. Of these six, P03, P08 and P13 stated that their manager had not managed staff before nor were they aware of any formal training being given to them, therefore the perpetrator did not know how to deal with staff. When the pressure came on, they reverted to cyberbullying as a means of coping. In addition, P02 and P09 felt that a lack of skillset and training for the role also contributed to their experience. For example, P03 stated that "he was like a lot of managers who come into a business ill-equipped to manage people. He did not have the skills to manage people and had not done so before". P04 also supported these comments as her manager was in his first managerial role and felt he lacked the core competencies and capabilities to be an effective manager which influenced his behaviour. She also commented on his lack of emotional intelligence.

4.4 Organisational

Participants identified factors within the organisation as the most significant contributors to their experience of workplace cyberbullying. Factors included a lack of training and distance, workplace culture, a lack of organisational support structures and performance pressures. The final three were deemed to be the most influential.

4.4.1 Workplace culture

Twelve of the 13 participants interviewed felt that the workplace culture had the single greatest impact from an organisational perspective. This was influenced in three keyways; the toxic nature of the organisation, the fact that bullying was accepted and driven at a senior level, and that back channels undermined the employee and caused friction. As these are inter-dependent, they are discussed together in the following paragraphs. The participants further believed that all of the organisations that were aware of the behaviour, allowed it to continue. P02's comments supported this by saying "when new people would join the business, they would either be bullied or be drawn into the behaviour becoming totally involved, adding fuel to the toxic environment". This toxicity was reinforced in P07's comments that her environment was an influencing factor as gossiping was rife and people treated each other poorly. P10 believed that "there was an inherent company culture of bad behaviour from the top down. Senior managers would constantly be dressed down in front of others. Therefore, I think my boss felt he could do the same".

Workplace culture also influenced the resolution of complaints of cyberbullying. It appeared that this had a strong influence over the longevity of the abuse, whether the behaviours were tolerated and how the organisation responded to complaints. For example, P10 commented that she felt that the organisation backed the perpetrator as the boss and did not care how he treated others below him, as long as he got the results they wanted. “They didn’t care that the culture affected the employee”. This factor, in turn, may influence the under-reporting of bullying experiences.

4.4.2 Performance pressure

Three of the 13 participants (P02, P03, P13) felt the organisation used a combination of bullying and cyberbullying tactics as a vehicle for constructive dismissal due to financial and restructuring pressures to save money. Specifically, P13 commented that ‘The Group’ brought a number of other businesses to add to their portfolio and was financially bleeding cashflow. He believed that the Regional Manager was employed to clean out all of the long servicing store managers and replace them with managers on less to cut costs: “He behaved like this to others so I don’t think it was personal, just a means to an end”. A further four participants (P05, P08, P11, P12) felt that financial pressures on the organisation were a contributing factor. P11 commented that when revenue was down the owner of the business would send more abusive messages than normal. P12 also concurred with this finding and felt that the pressure applied by the organisation contributed to the perpetrator’s behaviour toward her as an individual.

4.4.3 Lack of organisational support

A lack of organisational support was noted by 12 of the 13 participants as an influencing factor in their experiences. This included; a lack of employee support, intervention, and policies on acceptable behaviour. Even P05 who felt she had received good organisational support initially, still felt they failed at the final hurdle as the conditions of the mediation were not enforced and the perpetrator remained in his position without consequence.

In organisations that promoted their support of the employee (P08, P13), participants still believed that this was 'lip service' by the company who wanted to be seen as supportive, but in reality, were not. For example, P08 revealed that he had spoken to HR and nothing was done. P13 had a similar experience when he approached the HR manager and was told "that she could not help him as she had to act on the company's behalf". Then they stopped another staff member acting as a support person by suggesting it would not be in their best interests. This lack of empathy and action by the organisation meant that the behaviour continued and, in some cases, further enabled the perpetrator (P08, P13). Participants felt powerless to push back against the behaviour, without suffering significant consequences.

A lack of organisational support influenced the resolution of complaints of cyberbullying. It appeared that this had a strong influence, as did the workplace culture, over the longevity of the abuse, whether the behaviours were tolerated and how the organisation responded to complaints. Interpersonal relationships

between perpetrators and their superiors also played a part with support structures being compromised due to these relationships.

4.5 Societal

Only two societal factors were identified by participants (P07, P12) as influencing their experience of workplace cyberbullying. The issues raised related to an industry culture of bullying and a lack of legislation and emotional understanding around the impact of cyberbullying outside the social media forum.

4.5.1 Industry culture

Participant P07 believed "the beauty industry is rife with bullies" having worked in it for a sustained period of time.

4.5.2 Legislation

The NZ legislation around workplace bullying, which encompasses cyberbullying, was a factor identified by P12. She believes the current legislation plays a significant part in cyberbullying experiences as health and safety is internally managed by the organisation and not taken as seriously as traditional bullying. It reaches much further with cyber space extending outside the organisation's physical walls and this is not accounted for in the 90-day legislation.

5: Discussion

The focus of this research was to explore individual experiences of cyberbullying in the NZ workplace, in order to identify how different factors influenced this experience. Interviews were conducted to gain insights into these experiences, then coded through the thematic coding process (Braun & Clarke, 2006) which involved a three-step iteration. This revealed eleven key factors that participants felt were influential. These are discussed below.

5.1 Individual Factors

5.2.1 Participant

Participants identified a wide range of factors that they felt were significant, of which personality traits, confidence levels and demographics were deemed the most influential. Some research has shown personalities that are more likely to tolerate being bullied (Porath, 2013), include individuals with limited social skills (Zapf & Einarsen, 2011), and those with more passive tendencies (Coyne et al., 2000). Other studies also reveal that dominant personality types are not exempt from bullying behaviours, nor are employees that show high levels of achievement (Kim & Glomb, 2010).

On the other hand, Bowling and Beehr (2006) found through their meta-analysis of 168 studies, that the influence of individual factors was negligible compared to other factors regarding bullying. This supported Leymann (1996), who also felt that an individual's personality was not an influencing factor. Yet, the findings of the current study suggest that individual factors do indeed

influence experiences of cyberbullying. Cyberbullying allows the perpetrator to hide behind technology and harass the victim at any time of the day, from within the organisation or outside the confines of the organisation walls. A lack of confidence to address the issue of cyberbullying or confront the perpetrator was a key theme that emerged. This finding supports existing studies of Leymann (1996), Coyne et al. (2000) and Einarsen, Raknes, and Matthiesen (1994) in relation to traditional bullying who suggest employees that are non-confrontational or shy, and outwardly lack confidence are often targets. These findings indicate that victims of bullying may not be confident enough to fight back which effected their overall experience and may also be relative to cyberbullying in the workplace as the findings suggest similar issues. Yet, it does not exclude participants with high confidence levels as individuals, some believing this fuelled the behaviour.

Ethnicity was found to influence the cyberbullying experience for some participants, as these participants felt the perpetrator did not necessarily understand their cultural differences and values, and therefore they were treated poorly. There are few studies internationally that evaluate demographic bias or cross-cultural differences, concerning cyberbullying in post-educational situations (Forssell, 2016; Lund & Ross, 2017) to compare this to. Understanding more about cross cultural issues between victims and perpetrators may offer an insight into why victims are cyberbullied and possibly move towards addressing the issue in some way.

This study found that the demographics of the participant was an influencing factor for some. This factor has divided some researchers between those that suggest that gender could be an influencing factor (Hauge et al., 2011) and others that do not (Bentley et al., 2009). Yet participants who received cyberbullying messages containing sexual innuendos and threatening messages were adamant that they were taken advantage of because the perpetrator felt they could use the participants gender to their benefit.

5.2.2 Perpetrator

Negative personality traits, a lack of management competencies and behavioural tendencies were identified as they key themes related to the perpetrator. Past researchers have indicated a lack of empirical research to support the theory that personality traits influenced the experience of workplace bullying (Hoel et al., 1999), suggesting that it is likely that factors such as leadership styles (Hauge et al., 2011) and control over decision making are more influential. The findings of this study did not support this, rather it concurs with Madan (2014), who found that personality factors specifically influence the experience of cyberbullying. Perhaps then, it is the case that cyberbullying experiences are influenced by personality more so than traditional bullying. Madan (2014) found narcissism, one of the 'Dark Triad' behaviours, as an influencing factor, suggesting that although cyberbullies appear outwardly self-confident, that in reality they may possess low self-esteem which contributes to this behaviour. Madan (2014, p. 1743) also concluded that 'individuals high in narcissism did participate more frequently

in indirect bullying than in physical direct bullying', which may suggest a reason as to why personality may be more of a contributing factor for cyberbullying than face-to-face.

Behavioural tendencies of the perpetrator related closely to how perpetrators conducted themselves, over-reacted to situations, shot from the hip, and belittled others to hide their own incompetence. This contributed heavily for some as this decreased their self-confidence, self-esteem, and productivity, leaving them feeling upset and intimidated.

The third key theme was the perpetrator's management competency. Specifically, more negative behaviour was displayed by some perpetrators when they were under management or performance pressure, than by others. According to the participants, the perpetrator's management style and a lack of experience played a significant role in how they dealt with this pressure and how this manifested toward the victim. These findings concurred with Agervold and Mikkelsen (2004) who found that certain management styles may have contributed to a higher level of bullying. This also supports the findings of Hoel et al. (1999) who found that supervisors released downward pressure to perform by bullying other employees and that the bullying itself always related to the perpetrators management style, therefore extending the power differential between the two. Although both of these studies related to traditional face-to-face bullying, they align strongly with the findings of the current study.

5.3 Organisation

In the past, bullying has been viewed as more of an interpersonal issue rather than an organisational one (Einarsen et al., 2011). The findings of this study somewhat disagree but support Gardner et al. (2016, p. 448) who found that the work environment was a contributing factor in acts of cyberbullying, with 'less organisational support and less effective organisational strategies, associated with more instances of cyberbullying in the workplace'. A key finding of this study was that a lack of support, strategies, and workplace culture influenced individual's experiences of workplace cyberbullying and contributed to an unhealthy working environment. This finding supports existing studies with similar findings (Rhodes, Pullen, Vickers, Clegg, & Pitsis, 2010), but added organisational performance pressure as a contributing factor, specifically surrounding organisational change and financial pressures. No literature could be found on organisational performance pressure, therefore this may be worthy of investigation, as the participants felt the hostile work environment supported poor behaviour. This led to an environment where people blamed each other for not achieving targets and would cyberbully to cover for their lack of support and management competencies, in order to achieve results.

Comments made by the participants inferred that these factors were only part of a wider problem, namely the organisation itself, with a systemic culture of bullying and cyberbullying, being present and accepted. Without a supportive environment some participants felt there was no point in speaking up, felt powerless and therefore, allowed the cyberbullying to continue.

5.4 Societal

Societal factors were only deemed to be an influencing factor by a small number of participants, yet, these themes were included in the report as the researcher felt, from the participants comments, that most had not ever considered how external factors may have influenced their overall experience and therefore, could not be ruled out.

6.0 Conclusion

Although studies are increasing in this field, a gap in the research still exists regarding factors that influence the experiences of cyberbullying of adults in the workplace, (Baruch, 2005; Coyne et al., 2017). In an attempt to fill this gap in part, this research study explored experiences of cyberbullying in NZ workplaces from the victim's perspective, with the key purpose of further understanding the role different individual, organisational and societal factors play on individual experiences of workplace cyberbullying. The results of the study reaffirm what is already known in the current body of literature and add a couple of additional insights.

Eleven key factors were identified throughout this as influencing the experiences of the participants interviewed. These included individual personality traits, confidence levels and demographics, and perpetrator's personality traits, behavioural tendencies and management competencies. Organisational factors included workplace culture, performance pressures and a lack of organisational support, while societal factors included industry culture

and inadequate industry support. Regardless of the factor, the impact on the individual subjected to workplace cyberbullying and how they perceive the experience can be significan, causing a loss of job satisfaction, self-esteem and motivation, leaving the victim to feel disempowered by the perpetrator (Coyne et al., 2017). Stress-related disorders, depression, anxiety, and fear can also manifest as a result of this behaviour (Baruch, 2005). These factors can also have a negative effect on the organisation. Effects on the organisation include increased rates of absenteeism, staff turnover and productivity loss (Rayner, 1997). These factors all have a significant impact on an organisation's internal culture, team performance (Coyne et al., 2004), and employee commitment (Bowling & Beehr, 2006), not to mention the financial cost to the organisation (Kowalski et al., 2017).

All participants felt that they had been victims of traditional face-to-face bullying as well as cyberbullying. Bullying characteristics such as an abuse of power (Slonje et al., 2013), aggressive behaviour by the perpetrator (Slonje & Smith, 2008) and repetition over time (Olweus, 1993) were present across all participant experiences of workplace cyberbullying, suggesting that there are similarities between the two, even though cyberbullying occurred through modern technological devices (Slonje & Smith, 2008) rather than face-to-face. This provides evidence to contribute to the debate around whether bullying and cyberbullying should or should not be treated differently and supports the view that perhaps they should not be.

6.2 Limitations and recommendations for future research

This research study aimed to provide insights into individual experiences of cyberbullying in the NZ workplace. Whilst the size of the sample population is only small, and the researcher believes statistical saturation was met, it could be that many of the factors are context specific and depended on the nature of the work or industry. The study also focused only on the victim's perspective. While the views of the victim in cases of cyberbullying are particularly important, it is also imperative to recognise that cyberbullying is a highly subjective phenomenon and the views of the perpetrator may differ from that of the victim. Further research should, therefore, explore other perspectives in order to gain a more complete account.

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Feasibility review of a start-up full-service freelance ICT firm in NZ

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Executive Summary

The goal of this report is to determine the feasibility review of a start-up full-service freelance ICT firm in NZ (New Zealand). Full-service freelance marketplaces provides quality control by screening talent and / or projects with hands-on consulting and project management services (Mackey, 2014).

The problem is finding a unique business solution for a freelance firm in NZ that can deliver high quality at low cost and excellent customer support. Freelancers in NZ found on the leading domestic freelance service providers are among the most expensive in the world (Codementor, 2017). Most NZ platforms lack effective quality control measures. Virtually none of the NZ freelance service providers offer customer support to understand business and goals, while this would be the expectation from consultant or agency (Allotey). On the other hand, the problem with agencies and consultants, is that they are notoriously expensive and typically carry a lot of overhead (Do, 2017). Meanwhile, global freelance industry leaders offer highly competitive rates, but most lack quality control measures under the guidance of a PM (Project Manager). Other shortcomings include: unfamiliar with the NZ market; disparity in communication and geographical distance; and

developers have a tendency to be focused on technical requirements without a clear understanding of the underlying business or goals (Meadows, 2013).

Freelance Web (New Zealand Company Office, 2017) provides such a solution that satisfies the above gaps in the NZ market. In essence, the delivery of quality ICT product development services, which saves a significant amount of money without any obligation delivered from a trusted NZ firm that provides excellent business support and an understanding of the local market (Kotler & Keller, 2016).

This report begins by outlining the research aims, background of the researcher and then introduces the three research questions as follows:
Research question 1: solving a unique problem.
Research question 2: finding qualified freelancers
Research question 3: adopting an effective strategy

A competitive analysis is performed on website design, development, ICT and freelance industries, so the competitive landscape, all the markets and their relevance to one other is understood.

The literature review is conducted to investigate the opportunities and challenges, strategic positioning, situational analysis, and gaps to be avoided. This is applied to the framework and methodology of the research design by evaluating the research questions and the research paradigm. The research design provides the

answers to the research questions, while the strategy explains how its implemented.

Conclusions are drawn with consideration with how the information was discovered and shared with the wider community. Recommendations are closely tied with both the quantitative and qualitative stages of this report. The recommendations make reference to the literature by evaluating the merits of the feasibility of a start-up full-service freelance ICT firm in NZ.
The value proposition encompasses the value discipline and analysis of how Freelance Web increases the efficiency of ICT services to deliver the maximum value at the most competitive price with excellent customer support and is pitched as: *NZ's only full-service freelance: hire high quality at low cost.*

Introduction

This report focuses on the NZ freelance marketplace. The global freelance market is mature by all accounts with the likes of Upwork, Freelancer and Fiverr that employs millions of freelancers and projects available with an estimated valuation between 1.5 billion and 600 million USD respectively with market entry in 1999, 2009 and 2010 (Mackey, 2014). This caused high quality freelancer to search niche markets.

Many NZ SMEs (small medium-sized enterprises) search for low cost ICT (information communication technology) for hire. Secondary competitors seek

ICT through recruitment; self-service platforms; design/development and agencies.

Research aims for this report

The aim is to determine the feasibility of a start-up full-service freelance ICT firm firm called Freelance Web which targets SMEs in NZ. freelancers (gig-economy) are utilised by leveraging global freelance industry leading platforms. The freelancers are managed by a certified PMP (Project Management Professional) PM in ICT and matched to the project. The consultant organizes among buyer and freelancers; project kick-off, contract signoff and managing relationships. The goal is to yield quality results at low cost by exploiting freelancers abroad.

Background of the researcher

I possess 15 years of ICT experience, 3 years' ICT advanced diploma, and PMP certified. While working a PM in Australia, I explored outsourcing for low cost and efficiencies. I implemented full-service freelance that follows PMBOK®, vetting process, KPI expectations and applied communication channels (Mackey, 2014).

Research Questions

Research question 1: solving a unique problem

What competitive advantage is solved for SME (small-to-medium enterprise) in NZ?

Research question 2: finding qualified freelancers

How to find qualified and reputable freelancers competitively priced for SME in NZ?

Research question 3: adopting an effective strategy

What effective strategies does a start-up ICT firm adopt for SME in NZ?

Vision

High quality standards, operational excellence, and stellar service supporting NZ SME.

Highest quality standards

Buyers get vetted freelancers that satisfies their ICT criteria and deliver expectations.

Operational excellence

Buyers receive ICT solutions to solve their goals and meet objectives/challenges.

Superior customer service

Connecting ICT buyers with technology vendor/partners with local consultation.

Objectives

Supporting objectives to provide specifics with what is undertaken (Nicoletti, 2018).

The overarching objective is to discover the feasibility of a start-up ICT full-service freelance and consultancy firm in NZ with objectives and goals.

Market/Firm Review

Description of ICT industry

Freelance Web Ltd. industry classification of M700040 as an internet website design service (New Zealand Company Office, 2017) that includes website development and consulting services (Business Industry Classification Code).

Computer System Design firms provide expertise in ICT that includes web design, software development, consulting in computer hardware programming and software, internet, and software installation and systems analysis services.

ICT growth and relative size to GDP

ICT in the tech sector accounts for significant economic activity. Software companies that design and develop websites and systems used by enterprises for computer system design was on pace to grow by 9%.

Cost of ICT labour and skills

The average wages of skilled resources for computer system design is $99,700 in 2015 and doubles the average New Zealand wage which is of $52,950 (Ministry of Business). Computer system design firms job vacancies are harder to fill more than any other sector within NZ. Computer skills was the hardest to find for NZ employers.

Demand for digital skills across the economy

In 2015, 72,200 people sought ICT services jobs, an increase from 24,600 since 2005; and a compound annual growth rate (CAGR) of 4% annually (Ministry of Business).

The category of Software and Applications Programmers amounted to two-thirds increase in ICT services jobs between 2005 and 2015; Freelance Web skills sought.

Website design and development market overview

Introduction

Websites are designed across companies and how content is presented depends on: cultural differences, individualism, and the power distance or people who are in high power at companies that make websites and have a say in their design.

Web development

Web development ranges from a simple static web page of text to complex web-based applications, businesses, and networking services. Web development mainly includes: web design and development, client-side/server-side scripting, client liaison, network security configuration, web server and e-commerce development.

Freelance Web mainly focuses on freelance: creative/design and web development.

Web design

Web design describes the process relating to the front-end (client side) design of a website that displays the website. Web designing involves the awareness of usability, web accessibility and up to date standards for mark-up coding developed.

The skills and disciplines that web design encompasses to create, produce and maintain websites, includes: web graphic, user experience and interface design; authoring code and proprietary software; search engine optimization (SEO).

Firm review

Competitive analysis

Competitors include: marketing, strategy, offensive/defensive, opportunities/threats. The PESTLE analysis analysed the competitive environment. A SWOT Analysis was conducted for marketplace research and NZ competition.

Lterature review

What's the problem freelance ICT services uniquely solve?

The ability for an NZ freelance firm to deliver quality ICT services targeting SME companies in NZ without the required resources, while providing low cost with local onsite consultation. Competitive analysis found no reputable

companies that provide this offering. There are four stages for a successful entrepreneur (Hong-Haftel, 1996).

Stage one: focus on the opportunity to become an entrepreneur
The process begins with the opportunity of creativity and problem-solving skills.

Stage two: feasibility analysis of the proposed business venture
The new business venture is analysed by examining the methods proposed and determining the ideal conditions to move forward to achieve proof of concept.

Stage three: focus on the strategy of the venture to be executed
The business plan of the new business includes operations and the funding strategy.

Stage four: move from proof of concept to the execution strategy
Fund and grow the business, plan unknowns, and entrepreneur/investors' strategy.

Find qualified, trusted and competitively priced freelancers

Vetting process
Performance will be improved with communication of scope, quality and timelines. By applying guidelines, SRS (software requirements specifications) and best practices, the qualified PM will follow PMBOK to measure KPIs (key performance indicators). Well-defined SRS will be implemented for the PMP

certified PM to follow, which is in addition to following the agile methodology, so performance should be improved. NZ low cost market efficiencies in price will be accomplished by removing the need for consultancy overhead by directly bridging PM with the matching competencies.

Freelance search

Freelances are found from industry leaders by searching online through procurement process to match buyers, including: Upwork, Freelancer and Fiverr.

Online business purchasing provides several advantages: reduces transaction costs for both the buyers and suppliers, reduces the amount of time between order and delivery, consolidates purchasing systems, and develops a more direct relationships between partners and buyers (Kotler & Keller, 2016). The downside is that it may erode supplier buyer loyalty and potential security problems (Kotler & Keller, 2016).

Freelance solicitation

After potential buyers meet the required SRS, a supplier list is developed for the buyer to have proposals submitted and a shortlist of invites to provide their case on why they can be successful to meet the supplier needs (Kotler & Keller, 2016). Online procurement facilitate the solicitation process with a rating system that lists competencies to match the job details, work history, and feedback (Upwork, 2018f).

Freelance Web will measure the success between suppliers and the PM.

Freelance selection

Traditionally, buyers specifies/ranks suppliers with evaluation model.

The vendor analysis process to target market are political-problem type of products, such as a computer system or software platform. This includes: price, supplier reputation, product reliability, service reliability and flexibility (Kotler & Keller, 2016). Freelance Web will adopt Upwork's rating system for vendor analysis.

Buyer specifications

After suppliers are shortlisted, the buyer can negotiate the contract details by listing: SRS, quantity, schedule, penalties of SRS, warranty and so on (Kotler & Keller, 2016). Upon freelance hire, they are bound to meet the SRS they agreed upon. Failure to not meet SRS, can invoke the buyer to request a refund. An agile framework will mitigate unmet expectations and/or contract obligations.

Performance review

The buyer can review performance rating of the freelancer using a weighted-score method or aggregate the cost if subpar and adjust the price (Kotler & Keller, 2016). This buyer has the ability to continue, modify, or end the relationship. Failure to meet the SRS, the freelancer deterrent is a negative review.

The strategy an ICT freelance full-service firm can adopt

The best practices approach for ICT directed at SME is to adopt a flexible approach, which is an agile business model. This business development model can add value for procurement. Applying lean processes is based on successful agile case studies that presented how value was successfully added through procurement (Nicoletti, 2018).

Methodology and Research Design/Methods

Mixed methods

Quantitative/qualitative methods designed to exploit strengths, while minimising the limitations of each approach (Jacoby, 2017). This closely parallel the context in the researcher's work by evaluating the feasibility of a freelance in ICT industries.

It's crucial to create a website for the success of a start-up business to be feasible so marketing can be effectively performed online. Interviewing SME business owners triangulates the internet survey with the qualitative research. After the survey, open-ended questions in a semi-structured interview focused on qualitative data discovery.

Survey and sampling method

Surveys and sampling provides comprehensive detail to obtain data and maps the qualitative data to provide understanding and concerns of this proposal's discovery.

The use of surveys and sampling method includes four main advantages: empirical data focus, quantitative/qualitative data, wide/ inclusive coverage, cost and time. Research participants, sample size and its parameters involved individuals and SMEs. The information collected involved a description of its use, how the analysis of the data answered the research question, and the models that assisted with the analysis.

Advantages of surveys and sampling

Collection of quantitative and qualitative data

The criteria focuses on the reliability, validity, replication and general fashion of data (Onwuegbuzie & Johnson, 2006). The challenge was finding dependable inferences, credibility, and trustworthy to argue the legitimacy in the mixed method process.

The mixed methods approach use of a survey with self-completion of questionnaire and follow-up interview generates significant volumes of quantitative and qualitative data, that was subjected to statistical analysis (Denscombe, 2014).

Coverage that is wide and inclusive

The small-scale interview surveys cases, used sampling techniques that allowed an analysis of data from a range of relevant items/people and outliers for information. The participants included locations across mostly NZ, Canada and Australia; male and female; multi-billion companies to less than 100K; aged 29 to 87 and a median of 43.

Cost and time

The questionnaire used SurveyMonkey without any distribution cost, provided high quality functions/capabilities and almost instantaneously results (Tech Radar, 2020).

Data collection

Development of the survey

The survey generated data, analysis and reporting. Data collection best practices ensure completeness with literature and reviewing criteria.

Development of the questionnaire

The questionnaires provided data using viewpoints of participants to produce value in addition to cost effective, simple, and quickly (Wilkinson & Birmingham, 2003). The following guidelines and best practices were applied: fit for purpose, response rate benchmarks, respondents' vs non-respondents, clear representative sample and techniques, analysing sampling relevance and sample

size (Denscombe, 2014). The questionnaire contained 10 statements derived and adapted with research tools of the survey method, which focussed on how the proposal could be implemented.

Survey questions selection and creation

The survey included the following information: unique offering, value proposition, goals, respondents' feedback and interest in the services. The survey's best practices included: usefulness, satisfaction, and the ease-of-use of the questionnaire (Lund, 2001). The questions in these tools were developed by following a process of testing, descriptive statistics approach and then validating the analysis of the data collected.

Participants

SMEs candidates were sent a message with the survey link, description of the offer and value proposition in Facebook and LinkedIn.

Formula applied to calculate sample size

An important factor of the formula is the z-score, which is the number of standard deviations from the average from the confidence level.

Reasoning for an appropriate sample size

The sample size achieved provided an 80% confidence level to support the feasibility (Jurado & Battisti, 2019). Candidates were from NZ, but also Canada and Australia.

The majority of firms (69%) are NZ business owners (20 out of 29 participants), (28%) reside in Canada (8 out of 20) and one SME (3% of the survey) is from Australia.

Importance of an appropriate sample size

Three key factors are important to understand the calculation of the sample size: population size, error margin, and confidence level (SurveyMonkey). Population size: 487,602 SME registered businesses in NZ (Government, 2016). With an 12% error margin, the 80% confidence level suggest a high degree of accuracy.

Demographics

The information collected included: location, age, gender, and revenue by the SME. The survey was posted on Facebook public forum for SME and received 7 responses from 296.5K people. Subsequently, the researcher's contacts from Facebook (249), LinkedIn (256), which equalled 505 people. Based on selection criteria, 34 people were identified. The focused personal message had a snowballing effect with 22 respondents taking the survey or a 65% response rate (Denscombe, 2014).

Gender

Respondents comprised of six females (21%) and 23 males (79%). In NZ 33% of SMEs are female and ranked as the fourth highest in the world (NZ Business). In comparison to the 8 Canadian respondents, 13.7% of SMEs are female owned (Women Entrepreneurship Saskatchewan, 2018). The combined NZ and Canada

averages compared to the respondents results was an acceptable rate (NZ Business).

Location

Based on the SME location, 28% reside in Canada (8 out of 29 respondents), 69% from NZ (20 out of 29), and 3% are from Australia (1 out of 29).

Age

The highest respondents age was 29-34 (7), 35-39 (7). The next highest respondent age: 50-54 (6), 45-49 (4), and 40-44 (3). The oldest respondent was 87.

Data analysis

The strategy involved collecting SME quantitative data for the survey using simple descriptive' statistics. This offered insights as follows: data organisation; summary of the findings; displaying the evidence; description of the profile, data distribution; and exploration data connections, including correlations and its associations. Ordinal quantitative data was applied on counts of things assigned to survey categories. The questions were clear, ordered, and relationship ranked with graphs. The interview process for qualitative data collection followed these steps: coding of data; grouped codes into categories; comparison of categories and themes; and searching for concepts that encapsulated the categories of questions asked.

The analysis of the data was sent into graphs and metrics that included: strategies, business model, unique selling point, value proposition, and marketing.

Question 1: How innovative would you consider the idea?
The analysis suggests the majority of respondents (62%) felt the idea is somewhat innovative and 28% believe the services are extremely/very innovative.

Question 2: When selecting a company to produce IT web services, how important is quality compared to the cost?
The purpose was to gather feedback on what qualities and the weighted importance are most important to ICT buyers, between the services quality offered and the cost. The analysis suggests the majority of respondents (68%) believe that quality is the overwhelming deciding factor in their decision making for ICT services.

Question 3: When you think about the proposition, are ICT services something you need to improve upon for your business?
The purpose was to gather feedback from respondents about the feasibility of the offer and likelihood of whether there is interest in its ICT services offered to buyers. The analysis of the answers suggests the majority of respondents (62%) either definitely or probably need the such services and there is potential in further 28% that could be persuaded. These finding helped to support market feasibility.

Question 4: How likely would you use it instead of competing services available from other firms?

The purpose was to gather feedback from respondents about competition of companies and the respondents existing ICT service provider. The analysis of the respondents' answers suggests the majority of respondents (62%) are somewhat likely to use the proposed ICT services provider.

Question 5: How likely would recommend to a friend or colleague?

The purpose was to gather feedback from respondents about how trustworthy the offer and likelihood to recommend its services to other buyers, friends/colleagues. The analysis of the results suggests not to recommend the firm and this could be due to lack of credibility as an established ICT services provider.

Question 6: What things do you like most about the services offer?

The purpose was to gather open-ended feedback on what appealed to respondents about the proposal's offer when hiring high quality ICT services. The analysis of the most mentioned positive feedback are as follows in order of significance: ease of use, flexible & filling skills gaps (28%); low cost (21%); search, matching and selection options (14%); improved customer service & direct communication (10%); project management, quality assurance, reviews/vetting (7%).

The following are the areas analysed on what could use improvement: Unsure (14%); not unique (7%); offer and value proposition needs to be more descriptive (3%).

Question 7: what would most like to improve about services offer?

The purpose was to gather open-ended feedback on what didn't appeal to the respondents about Freelance Web's offer for ICT service as a buyer and what could be changed for to better adapt on what is important to SME buyers.

The analysis of the most mentioned positive feedback are as follows in order of significance: not sure (34%); offer/value proposition needs to be more descriptive (24%); quality/rating (21%); expand categories from ICT (10%); more marketing (3%); search, match and selection options (3%); transparency (3%).

The semi-structured interview

Quantitative data from SME questionnaire was followed by sequential, explanatory, mixed methods approach through a semi-structured interview. This user experience helped with verification of the qualitative data (Denscombe, 2014). The interviews generated rich data with insight of experiences, contexts and values (Gillham, 2000). Through the interview data, two themes emerged: first, the lack of understanding about Freelance Web and the offer; secondly, how the value proposition is unique? Advice suggested the offer focus on the target buyer and unique value proposition.

From marketing/SEO (search engine optimization), TRADE WITH IT (former business name) sounded like selling products, so the firm's name updated to Freelance Web.

Conclusions

Significance of research

SMEs in NZ seeking freelance ICT services have increased their need ICT in NZ. The economic viability is well positioned, since the value proposition offers much lower price at high quality. The difference of economic disparities from developing nations with a wealth of ICT talent provides available freelance with lower standard of living. Therefore, freelances can deliver high quality ICT services for NZ SME at a fraction of the price versus NZ competitors. The average rate for Web Design and Developers is NZD $23-30 per hour (PayScale), while in India its NZD $4-6 per hour (PayScale).

Unlike NZ freelance providers like Zealancer.co.nz and Needed.co.nz with very high rates, Freelance Web will charge closer to NZD $4-6 per hour (Codementor, 2017). The business model is feasible by leveraging freelance platforms. The unique offer provides similar services of an agency but high quality at a low price from an NZ firm.

Outcomes

The report found that a competitive advantage must be found to differentiate to compete effectively. This included the development of unique functionality, such as search criteria that matches ICT services with local presence. Projects should

be implemented with innovative processes/methods like agile in online procurement.

With NZ low cost mentality, efficiencies in price are imperative (Meadows, 2013). By removing consultancy overhead and bridging buyers with skilled freelancers directly, the delivery is by a PMP qualified PM (Mackey, 2014). Consultant processes can be automated/planned to deliver full-service freelance solution (Loukus & Dixon, 2014).

The feasibility of value offering will be delivered with a business strategy to explore the macro environment, understanding and creating supplier value, communicating and delivering the value, and using buy-grid stages (Robinson, Sahin, & Gao, 2005). Competitive advantage will be innovation not only technological, but process and method improvements and utilizing tools to reduce cost. By appealing to market segments the value of full-service freelance and advantage of NZ niche marketplace.

Question 1: How innovative would you consider the idea?
The proposal is based on high quality, low cost and superior customer service including local representation. The process of the innovative goals wasn't fully expressed causing lack of "Very innovative" feedback from the survey.
Unique offering information was undisclosed to avoid losing the intellectual property.

Question 2: When selecting a company to produce IT web services, how important is quality compared to the cost?
The results suggest the service should focus on high quality as the driver of the unique offer. This provided guidance on communicating the value proposition.

Question 3: When you think about the proposition, are ICT services something you need to improve upon for your business?
The results suggest the majority of respondents (62%) definitely or probably need the service and 28% can be persuaded. These finding help to support the market viability, but with further refinement and communication of the offer.

Question 4: How likely would you use it instead of competing services available from other firms?
The results of this survey suggests an opportunity if services offer delivered high quality at a competitive rate that is lower to provide great value. This provides assurance on feasible of marketplace if the value proposition is successful.

Question 5: How likely would recommend to a friend or colleague?
A significant social media effort is building credibility with social media platforms and increased Facebook and Instagram likes to approximately over 1K. The feedback found a lack of brand recognition and trust, so awareness was prioritised. Building trust and reputation are key attributes to success (Sara & Jutta, 2019).

Question 6: What things do you like most about the services offer?

The conclusion can be drawn that there are a lot of good elements in the offering as feasible a freelance ICT services provider. The positive responses helped establish Ease of use and low cost are what is most successful about the idea that identified the areas that Freelance Web offer should focus for improvements.

Question 7: what would most like to improve about services offer?

The conclusion is that Freelance Web has a lot of good elements in its offering in order to potentially establish itself as feasible freelance ICT services provider. This suggests the respondents are unclear about the offer. Quality was a significant deciding factor, while expanding categories instead of focusing ICT could add value.

Outcomes

The report found a competitive advantage will differentiate and compete effectively.

Updating the offer and value proposition is crucial. Ease of use and flexible features is greatly important. High quality at low cost is significant. Customer service adds value. Removing consultancy overhead allows the buyers to directly match with freelancers with specified criteria. The project is delivered from a PMP qualified PM, while a business consultant manages the buyer relationship and applies best practices. Full-service freelance services will be delivered with a buy-grid stages strategy.

Recommendations

Introduction

This section discusses the recommendation with reference to the literature, and evaluates the merits of feasibility to implement a full-service freelance ICT firm in NZ.

This section's purpose includes: research retrospective, review and contribution; recommendations to improve the situation; guidelines/codes of practice and their relevance to successfully implement an ICT firm in NZ with appeal to targeted buyers.

Retrospective evaluation of research and its contribution

The mixed methods research determined the feasibility as an ICT freelance business in NZ targeting SME. The involved market and competitive analysis, literature review, data collection methods and analysis. The feasibility narrowed down four key aspects based on the weight of the data: update the description and value proposition of the offer; ease of use/features; high quality at a low cost; and superior customer service.

Update the offer and description of business services

The most pressing conclusion drawn from respondents was that the TRADE WITH IT business name, did not sufficiently communicate what the firm stood

for or offered. The business name was subsequently renamed name to Freelance Web. The unclear description of the offer led a value proposition that was more clear about its services through highly targeted SEO keyword search analysis to targets niche NZ markets (Amazon Alexa, 2020) with the most popular keywords. The marketing message from the survey data conveys the retrospective evaluation.

Based on the competitive analysis, the same offer is virtually non-existent in the NZ marketplace, so the offer provides a unique competitive advantage.

Ease of use and flexibility of features

A clone freelance platform can be expanded and customised with technology to satisfy the buyer and freelancers and still provide a unique offer (Whitelance, 2019). Furthermore, a marketing strategy can communicate unique difference to its target buyer audience (Kotler & Keller, 2016). Technological innovation and economics are closely tied and the link between business strategy, innovation, and performance (Flynn, 2013). An innovative process will be applied that offers online services streamlined by the supply chain process and follows business methods to utilise existing advanced technological procurement systems from global freelance leaders.

Marketing strategy: market innovation and client services

Business marketers within Freelance Web will ensure that business buyers are fully aware and understand how the offer is differentiated and more effective by

advertising to SMEs in NZ. Five major dimensions are determinant for ICT projects: ease of use; user interface; information; security; and privacy (Hong-Haftel, 1996). A marketing strategy will communicate the benefits of cost saving to the buyers and the services are in their best economic and valued interest (Kotler & Keller, 2016).

High quality at a low cost

A consumer associates the quality of a website's design and service with trust and satisfaction that influences their online repurchase behaviour (Zhou, Lu, & Wang, 2009). Delivering high quality services to meet buyer needs, while remaining economically competitive is vital to the feasibility and success rate.

Overhead will be reduced by minimising the cost between web services and the system design cost with a holistic approach. This will encompass web design, development and implementation of websites, processes, activities and the breadth of interdependencies. This is feasible by exploiting the economic differences of countries through an arbitrage strategy (de Kluyver, 2012). Buyers will be connected to freelancers to match ICT requirements and cost only a fraction of NZ market rates. For example, the average hourly rate for a Web Developer in NZ is $50 NZD / per hour compared to India as low as $4 NZD / per hour (PayScale).

Global freelance leaders offer more competitive rates, but not full-service freelance, so this proposal will provide a distinct competitive advantage below

NZ market rates. The revenue model will operate at a highly competitive fee for buyers at 14.9%, which is more competitive than other NZ freelance services such as needed.co.nz, that charge 15% for their services (Banks, 2020). The standard fee rate for PM is typically 15-20% of a project's efforts (Brooks Jr, 1995). The average rate for a PMP certified PM from India is $20 NZD per hour on average (PayScale) that can handle at least 4-5 projects at a time. The 15-20% allocated for a PMP PM will be around $20 NZD per hour and this can be considered much less in comparison to the NZ freelance rate, but provide great value to manage project's KPI.

Superior customer service

Superior customer service will be accomplished with direct and clear communication to support the high quality of services to retain buyers and steady revenue stream. Customer service is vital to retain buyers and extract more value (HubSpot, 2019). High quality customer service can recoup buyer acquisition costs and foster loyalty, that serves as case studies, provides testimonials and reviews.

Customer service relationships

To achieve a competitive advantage, marketing mix can be integrated with customer service as a marketing strategy (Sterling Jay & Lambert Douglas, 1989). Buyer relationships will be established by utilising freelance websites vast resource network through partnership with global leaders such as Upwork and Freelancer, which allow their services to be shared providing their terms and

conditions are followed (Ivanovs, 2018). Upwork has an estimated twelve million registered freelancers and five million registered clients and an IPO of $1 billion dollars (Techlist, 2017).

Local and trustworthy

Trade Me business seeks value and appreciate local as their vision statement (Trade Me). Trust in branding and established reputable business image is a currency of the new economy that holds people together (Ministry of Business). When businesses transact, interact, and agree to engage in business, a trusted brand can provide important message of quality between trusted firm and the guarantee to uphold it.

Customer service research suggests by applying marketing mix strategy with trusted reviews as an effective tool with marketing strategy integration. Initial communication and establishment of trust is vital to credibility, so information will be collected in two-step process (Amos, 2019): SRS and freelance criteria.

Summary of recommendations

There were four key recommendations. First, update the description of the offer and value proposition. Second, easing the use and flexibility to support the services offered by streamlining the supply chain process. Third, focus on delivering high quality at low cost by exploiting global freelance platforms below NZ market cost. Finally, build strong buyer relationships with direct communication and trust.

Value Proposition

Introduction

The value-chain's purpose increases efficiency to deliver maximum value for the least possible cost as demonstrated by the elevator pitch.

Choosing a value discipline

The unique value differentiates from NZ competitors by solving SME buyer's problem to deliver high quality at a low cost with minimal difficulty, and serving the NZ market with a direct channel of communication with the availability of onsite consultation.

Outsourcing with adoption of an arbitrage strategy for its NZ target market exploits the economic differences (de Kluyver, 2012). Competitive pricing is accomplished by global leading platforms to search for freelancers from countries with a much lower cost of living such as: India, Russia, Asia and other developing nations (Codementor, 2017). The availability of freelancers from such markets offer skillset/experience with cost up to 70% with 25-30% saving by avoiding agencies (Do, 2017).

The NZ freelance industry leaders don't offer full-service freelance. By guarantying certified PM with services, a unique competitive advantage is

provided. Freelance Web business goals/vision is to provide ICT solutions for SMEs to NZ SMEs.

The operational excellence of low cost with high quality standard in the NZ freelance marketplace through arbitrage strategy is leveraged by inequalities of skilled freelancers in developing countries (de Kluyver, 2012). Buyers seeking local NZ talent that are cost-effective and demand high quality ICT solution provides a competitive advantage over NZ firms that neglect the arbitrage model to lower cost (Stuff, 2020).

Porter's value chain analysis

Primary Activities

Primary value chain activities improve the value offered to buyers.

Inbound Logistics

The focus is delivery of the finalised ICT services, including: project quote, storing the requirements, and internally sourcing the chosen freelancers for the development. Various challenges involve failing to meet ICT product development expectation of the service offering based on SRS and staying in scope to receive the buyer's signoff.

Operations

Analysis of operational activities is important for improving productivity, and maximising the efficiency to ensure the competitive success (Chatterjee, 2017). The increased service productivity helps to achieve consistent economic growth, increase profitability and powerful basis for competitive advantage by providing operational support and excellence that meets buyers' expectation based on SRS from analysis.

Outbound Logistics

High quality deliver of ICT services involves: vetting freelancers that are approved by the buyer; scheduling within SRS timeline; performing activities within budget; monitoring high quality performance according to buyer's SRS (de

Kluyver, 2012). Activities are managed to optimise costs and timely delivered processes to mitigate quality issues and achieve objectives. This will maximise the buyer's satisfaction to increase growth opportunities by ensuring there are positive reviews.

Marketing and Sales

The benefits and differentiation of services will persuade the buyer the offering is better than NZ competitors based on competitive analysis. Distinctive local onsite consultation features creates value in marketing and sales activities and plays an important role to attract buyers' repurchase behaviours (Zhou et al., 2009).

The website audit identified key areas for improvements and how to excel, while Google Ads backs the free quote value proposition (Freelance Web). Social media events are pushed to SMEs, while Google Ads are pulled to achieve sales business objectives. This improves brand awareness in the NZ market (Petrov, 2018).

Services

Pre-and-post-sales offering is important in developing buyer's loyalty, so modern buyers need to consider post-sale services for marketing and promotional activities. Negative word-of-mouth for poor support service can be detrimental. Timely and efficient support services deliver high quality services at a low cost.

Support Activities

The primary value chain activities of Freelance Web are coordinated which benefits from the analysis of the support activities as explained below (de Kluyver, 2012).

Firm Infrastructure

Strong relationships with freelance suppliers provide support necessary to receive, store and distribute the services of ICT product development. Value is based on the process of vetting freelancers', checking reviews, current rating, and qualifications.

Human Resource Management

The human resource management involves the PM evaluating its HR aspects, which includes: recruiting from global freelance platforms; selecting the vetted PM, ICT developers that meet the SRS and buyer's approval; training freelancers by educating on the terms and conditions; rewarding achievements with positive reviews and the opportunity for future projects; managing performance and personnel activities to ensure expectations satisfy the SRS supported by best practices (Chatterjee, 2017).

Technology

Almost all value chain activities depend on technological support (Büyüközkan, Baykasoğlu, & Dereli, 2007), and the integration of ICT service production, distribution, marketing and human resource activities. The process of matching

buyers with freelancers to source ICT technology-supported activities is automated. The website is customised with the unique offering to allow for fast entry to market and a competitive advantage over other market entry barriers (Whitelance, 2019).

Procurement

The infrastructure activities, such as quality management, handling legality, account and finance, planning and strategy. The infrastructure management allows the entire value chain to me optimised and controlling the infrastructure activities. Overhead costs are limited to strengthen competitive positioning in ICT freelance NZ market.

Conclusion

Operational excellence is the value discipline with strategic focus on: cost, efficiency, and volume. Outsourcing is adopted with arbitrage for the NZ market that exploits economic differences of countries. Quality is accomplished by applying freelance vetting processes, PMP PMs, excellent customer service and consultancy practices. Porter's value chain analysis improves value added to buyers including: inbound logistics and outbound logistics, operations, marketing/sales, services, and support. Firm infrastructure provides inbound logistics from SRS collected in a project quote and then matched to the freelancers before kick-starting the project. Procurement is an important process allowing for optimisation of value throughout the value chain.

New Direction for Future Development

This report is not without its limitations, including potential researcher bias in the data collection from participants with an existing profession connection. The survey small sample size of SMEs held an 80% confidence level with a 12% margin of error which is close to the bare acceptable minimum of respondents (Denscombe, 2014). Future research will apply a fair comparison of mixed methods applied to determine the best course of action for future direction. This will determine the most effective action/methods have the most robust convergence under typical circumstances.

The competitive analysis compared NZ most popular freelance platforms. Full-service freelance firms in NZ was not discovered, although Unicorn Factory closely resembled a lot of aspects. It would be interesting to examine global full-service freelance industry leaders i.e. Toptal (Toptal) to see how Freelance Web compares.

An increase in the level of trust to buyers is desired to promote and further refine quality and customer service improvements (Leondes, 1996). Future direction will continue with improvements in Freelance Web service offering, but there are more significant issues to resolve, so any future competitive advantage will be welcomed.

The current strategy is domestically focused to test the feasibility of the value proposition before deciding whether to expand abroad. Initial steps were taken for future global expansion into other similar western markets (New Zealand, Australia, Canada, United Kingdom, and United States) by securing branding and protecting intellectual property, including: trademarks, website domain purchases and business naming rights. This is a crucial in marketing strategies to secure a country's domain and protect entities which add to the value offer (Kotler & Keller, 2016). The findings represent future development for opportunities on evidence-based approach.

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IT and OT:
Practices That Influence Team Integration

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Abstract

The proliferation of internet-connected technology is growing at a rate not seen previously in history. Increasingly, technologies are crossing organisational boundaries into production environments where products such as refrigerators can interact with other technologies through internet connected software. Such innovations are produced by specialist teams from diverse information technology (IT) and operations technology (OT) backgrounds brought together by organisations. Arguably, these diverse IT and OT teams need to more adequately make sense of each other's actions and practices to improve overall project performance. This research project reports on a qualitative subjectivist study undertaken in New Zealand of IT and OT Team leaders.

Five themes were identified as influencing the integration of IT and OT. These themes include; the interpretation of key terms, the organisation and team structure, the influence of leadership and governance, communication and the tensions that were associated with integration initiatives. By identifying the

factors and challenges of IT and IOT team integration, this research contributes to the dearth of knowledge by providing insight to the underlying themes that inhibit or conversely encourage IT OT team integration and providing strategies to support future integration initiatives. This research informs practice scholarship through the evaluation of IT and OT team integration not seen previously in practice literature.

Introduction

The reliance on technology and information within society has never been higher. The pervasiveness of technology in our personal lives influences and impacts the way that we work, travel, eat, relax, socialise, entertain, and learn. There are a plethora of examples of recent technologies that impact, enhance and disrupt the way we live. Examples of these include: how we consume entertainment, with on-demand technologies like Netflix and YouTube; how we communicate, using a number of highly available and accessible social media platforms; how we travel; how we shop; and even how we pay our bills. While not being an exhaustive list of the emergent technologies, all these applications, tools, services and products have evolved as a result of some form of technology development program. The application and industry disruptions that have evolved because of their development have a common element. Virtually all technology platforms are the result of innovations produced by specialist teams, from diverse disciplines, brought together by organisations.

With the explosion of digital technologies, Information Technology (IT) teams face various challenges. These range from how to structure data for machine learning and Artificial Intelligence (AI), how to enable appropriate levels of access for teams, how to better collaborate and digitally enable the organisation and their interactions with customers, suppliers and the public. These challenges coupled with the fast-moving pace of digital technology has promoted an attitude and industry that embraces a fail fast, fail forward approach to technology development, implementation and adoption. These 'mantras' are supported by project and delivery methodologies such as Agile, and Velocity, with minimal viable products (MVPs) and rapid deployment approaches being an industry best practice approach as extrapolated from the Agile Manifesto (Fowler & Highsmith, 2001). To keep up in a rapidly changing environment, these are the strategies that are required to stay on pace with both market and industry.
In contrast to this is the Operational Technology (OT) teams. These are highly specialised teams that design, engineer and operate mission-critical infrastructure. "These systems are often highly engineered and use proprietary protocols that are specific to project requirements" (Murray, Johnstone, & Valli, 2017, p. 142).

Operational Technology refers to the hardware and software used with the automation controls systems within the infrastructure. OT networks and systems including, Industrial Control Systems (ICS) or Supervisory Control and Data Acquisition (SCADA) are used in multiple industries such as power, oil & gas, water treatment, transportation, defence, traffic control and even within private facilities to monitor and control functions such as heating and cooling (Shahzad et

al., 2016, pp. 1-4). Recently these teams are faced with the risk and impact that cybersecurity attacks can have. As the transition to Industry 4.0, and the Industrial Internet of Things (IIOT) gains momentum (Wakim, 2018) Operational Technology begins to overlap with Information Technology.

As outlined in the article by Murray et al. (2017), there is a convergence of the IT and OT spheres. There are significant technical challenges converging and integrating the proprietary nature of OT with open standards of IT, as is the challenge of maintaining the culture of an organisation (Murray et al., 2017). With the closer working relationship of traditionally separate business units comes with it the need to enable effective collaboration between these traditionally disparate competencies. Organisational transformation is required to ensure cross-functional teams can support and maintain the integrity and security of systems while maximising productivity and profitability.

Outline of the Research

The purpose of this research is to evaluate and understand the factors and challenges when integrating the two specific disciplines of Information and Operational technologies. To understand the factors and challenges this research seeks to understand the social practices of the actors involved (Vaara & Whittington, 2012). As cited by Vaara and Whittington (2012), Bourdieu (1990) proposes that the notion of practice is a way to explain how the objective world and the subjective actor come together in social action. A practice perspective is concerned with actions and interactions (Jarzabkowski, 2005). By using a

framework, such as Strategy as a Practice, this research can evaluate the practices and praxis of these different practitioners (Jarzabkowski, 2004) and how these interrelations may influence the integration of teams in the context of IT and OT teams in convergence projects

Research Questions

As a result of recent technological advancements in communications, sensors and data flow - in what has been coined the Fourth Industrial Revolution (Schwab, 2017) Lara, Sánchez, and Villalobos (2018) argues the importance of convergence. This research addresses this importance of convergence by providing insight into the challenges associated with the convergence of IT and OT teams by answering the following questions:

1. What are the factors influencing the integration of IT and OT teams?
2. What are the challenges influencing the integrating IT and OT teams?

The goal is to provide a set of observations and guidelines that assists in the rapid establishment of the teams that maximise the value that integrated IT/OT solutions provide while providing an environment which avoids the tensions associated with integrating these two disciplines. In the next section the discussion on literature about teams and team integration begins with identifying the challenges associated with each technology.

Literature Review

Introduction

The objective of this literature review is to identify and synthesise previous studies on the value and challenges of team integration. This literature review will illustrate that although there has been a significant amount of research relating to integrating individuals from diverse background and disciplines, there is little understood about the factors and challenges of integrating diverse teams in an Information / Operational Technology setting.

Definition of Teams and Team Integration

In this section teams and team integration is defined within the context of this research. Baiden, Price, and Dainty (2006) summarised that integration could be considered as the merging of different disciplines or organisations with different goals, needs and cultures into a cohesive and mutually supporting unit. They further elaborate by explaining that integration is used to describe the introduction of various practices and behaviours that create an environment by which effective collaboration by individuals and organisations may be achieved.

The Factors that Contribute to Team Integration

This section explores what is currently understood about the factors that contribute to team integration; what factors are currently known above the factor that may affect diverse team integration. Lichtenstein, Alexander, Jinnett, and Ullman (1997) provide the view that as the complexity of products and services increase as technologies develop, so does the requirement for a greater variety of

inputs to solve production and organisational problems. They acknowledged that creative solutions and problem-solving are more effective when working with diverse teams as opposed to groups composed of similar people. They go on to explain however that there is often an attendant cost to integrating diverse teams and that the skill and experience differences between the groups that make teams useful in the creative problem solving and solution finding are also the key elements that inhibit their amalgamation. This view aligns to the supposition that the diverse nature of IT and OT teams may be a fundamental factor that constrains their integration.

An article by Thomas, Hardy, and Sargent (2007) introduces the use of boundary objects to promote the sharing of knowledge. They explain that boundary objects provide a means of representing different functional interests across diverse groups with diverse goals. Boundary objects create a common ground for communication, conflict and coordination to be facilitated that leads to shared understanding. (Thomas et al., 2007). They go on to explain that because of the ambiguous nature of boundary objects, interpretation into their meanings affords diverse groups to find preferred meanings thus making cooperating with other actors more appealing. The use of boundary objects is of interest as this may represent one of the strategies to establish a shared language for individuals to represent their knowledge (Carlile, 2002) and may serve as one of the factors that contribute to the integration of IT and OT teams.

The Challenges of Team Integration

"A half a century of research on groups has made it abundantly clear, teamwork is difficult" (Edmondson & Nembhard, 2009, p. 124). Focusing on the challenges relating to team integration within a technology context, the literature shows us that although it is acknowledged that there are benefits to establishing teams with diverse individuals, that the same diversity is also a fundamental challenge to team integration (Lichtenstein et al., 1997). The literature, however, has not addressed the challenges associated with the convergence of traditional technology silos and the integration of the diverse teams as a result of technological convergence.

The need to converge IT and OT in an enterprise is highlighted in an article by Lara et al. (2018). They explain that although enterprises are comprised of many elements (e.g. human resources, organisational units, production process, IT systems etc.), they are modelled on two domains; business domains and IT domains. One of the problems that needs addressing is the omnipresent disconnection between Operational Technology (OT) and Information Technology (IT), which is often found across asset-intensive organisations (Lara et al., 2018). This has led to disparate teams, siloed processes and information sources, and low levels of communication (Edmondson & Nembhard, 2009). Lara et al. (2018) suggest that the explosion of new knowledge has led to greater specialisation. This expansion of technologies and subsequent diversification of knowledge requires that highly specialised individuals and teams are brought together. Organisations are finding themselves needing these individuals and

groups to collaborate to carry out integrative projects of diverse technologies. They go on to explain that integrated teams produce results ahead of schedule resulting in reduced cost and higher sales. This sentiment is shared by Baiden, Price, and Dainty (2003) :

An integrated team should be aspiration because it leads to efficiency of the delivery process, cost-effectiveness through the elimination of waste and increased profitability.

A Practice Lens

Scholars using practices based theories have argued that "[p]articipating and communication are unlikely to result just from bringing people together" (Jarzabkowski & Balogun, 2009, p. 1256). Dissatisfaction from scholars with many veins of organisational literature omitting the actions of humans when investigating performance, strategic management and integration (Jarzabkowski & Spee, 2009) has given rise to a broader "practice turn' (Reckwitz, 2002; Schatzki, Knorr-Cetina, & von Savigny, 2001) Drawing on the insights of the practice perspective offers to inform this research by being interested in what 'people do' and how they 'do it' (Jarzabkowski & Paul Spee, 2009). By defining parameters such as practitioners (the actors), practices (the tools), and praxis (the activity), a practice lens provides a suitably confined framework in which to evaluate the social dimensions of practices (Jarzabkowski & Paul Spee, 2009). Within the practice lens framework, it is the strategy-as-practice (SAP) literature that perhaps best offers insights into integration.

The above literature review provides an overview of what is currently known about the integration of diverse teams, some of the various elements that participate in team integration and the lens in which this research will evaluate the integration of teams being SAP. The next section will outline the proposed approach and method of evaluation.

Method

Introduction

This research project is a qualitative study using a subjectivist epistemological lens. A subjectivist view is one that sees practice evolving in the meaning and activities from the actors of interest, as opposed to objectivists who view that practice can be studied as an independent entity (Golsorkhi, Rouleau, Seidl, & Vaara, 2015). By taking a subjectivist epistemological lens, this research seeks to understand how the actors of integration, in this case, IT and OT technicians and engineers, have made meaning of the convergence of the two domains. As outlined by Mantere (2005), I regard the IT and OT actors as the best source of information when understanding the underlying potential tensions between these groups.

Strategy as Practice Lens

De La Ville and Mounoud (2015) provide the view that SAP research requires close scrutiny of the practices of practitioners in order to dive deeper into understanding the individual rather than the organisation. As this research is attempting to understand the factors and challenges associated with the

integration of IT and OT teams, this understanding will be achieved through thematic analysis of the individual participant's discourse. In effect, I approached participants' interviews as a way the actors see their reality, allowing me to see what makes sense in their story (Cordier, 2018). To make sense of the interviews, thematic analysis was used as the method of analysis to derive meaning from the interviews – this is discussed in more detail in section **Error! Reference source not found.**.

Respondent Selection and Recording Approach

Interview participants were technicians and engineers (practitioners) who had been involved in an IT / OT convergence projects and where these two domains had been brought together. These individuals were from any industry or organisation where an IIOT or IT / OT convergence project had been undertaken. These industries included manufacturing, logistics, forestry and utilities companies through-out New Zealand. The interviews were conducted face to face or via telephone and captured using a voice recorder or smart device recording application. Following an interview schedule, semi-structured interviews were seen to enable the best of both worlds for this type of enquiry, by enabling the drawing out of issues while permitting the interviewee to lead the narrative (Thomas, 2017).

Thematic Analysis

Thematic analysis (TA) is an umbrella term that encompasses various approaches with an aim to identify themes in qualitative data (Braun, Clarke, Hayfield, &

Terry, 2019) and 'should be seen as a foundational method for qualitative analysis' (Braun & Clarke, 2006, p. 78). Although it has been argued that thematic coding is a process of more traditional analytic approaches (ref to Ryan and Bernard) such as grounded theory, Braun and Clarke (2006) suggest that TA is a method in its own right. Braun and Clarke (2006) also argue that one of the benefits of TA is its flexibility as a research and analysis tool. TA can provide a rich, detailed and complex account of the data. This is useful for this research as it leverages the experiences of the each of the participants.

The result of the thematic analysis was the identification of five key themes, two of which had six sub-themes.

Findings

The sections that follow is an account of the key themes that attributed to the factors and challenges with integration of IT and OT. Theme 1 provides an insight into the different interpretations of the key terms IT and IT /OT integration and is supported by two sub-themes relating to the interpretation of IT, and the interpretation of IT and OT integration. Theme 2 discusses the findings as they relate to the organisation and team structures. Theme 3 discusses the findings as they relate to the role that leadership and governance play in IT and OT integration, which is followed by Theme 4 which discusses the findings as it relates to communication. Theme 5 discusses the type of tensions that were encountered during integration. Theme 5 includes 4 sub-themes that are broken into: people, metrics and goals, technology and governance.

Theme 1: Interpretation of key Terms

Theme 1 explores how four of the individual participants interpreted the key terms of IT and IT / OT integration. This is an important finding, as understanding how the participants interpret the key terms provide an insight into the context of the challenges they have experienced. Each participant is not from a specific industry sector, but rather from various industries across a range of sectors. Accordingly, each of these industries have their own technical language. It is apparent that the participants made sense of the key terms from their individual experiences and context. What follows are the subthemes relating to the participants differing interpretations 'IT', and 'IT and OT integration'.

Sub-Theme 1.1 - Interpretations of the term 'IT'

During the interviews the term 'IT' was often used interchangeably and without precision while still being relevant to the frame of reference for each of the participants experiences. The term 'IT' had noticeably different meanings, applications and implications between the participants. There were three significant interpretations of the term 'IT' identified from the interviews and interview transcripts. The interpretations include 'IT as a Service', 'IT as technology', or technologies and 'IT as people or business units'.

The implication to the research question 'what factors influences the integration of IT and OT teams?' the interpretation of IT provides context to the experience they are reflecting on. Understanding how the practitioners interpret terms provides an insight into how they make sense of the initiatives and how that may

influence the understanding of their environment (Fellows & Liu, 2016). This in provides insight the factors that may influence team integration.

Sub-Theme 1.2 - Interpretations of the key term 'IT and OT integration'

As highlighted in the previous section, interpretation of the key terms often differed between the various participants. When evaluating the context of the IT and OT integration there were various interpretations of what IT and OT integration meant or involved.

One of the key themes that developed from the interviews related to the manner, terms and arrangement that IT and OT work together. The participants provided contrasting views when comparing the organisations they had worked with or within. When referring specifically to IT / OT integration there were views that held that integration was related to the organisational structure.

In one case, IT and OT were not seen as integrated, as the IT and OT teams where not co-located or in close proximity to each other. This view of IT and OT not being integrated due to organisational proximity also held for other participants who explained that IT is a service that is consumed by OT and IT was delivered as a service.

In these cases, the integration of IT and OT was related to the proximity of these teams or personnel. Another interpretation of IT OT integration relates to the introduction of new technology into an OT environment and the integration that

occurred as part of that project. As some of the participants had been part of various organisational initiatives that introduced a new technology to their OT environments, these were the conditions that aligned with their understanding of what IT and OT integration meant.

In general, it was found when discussing IT and OT integration that these would generally be initiatives where IT is introduced into OT environment rather than the OT being introduced into an IT environment.

Theme 2: Organisation and Team Structure

This section explores the two sub-themes that arose from the relationship structure of the organisations and how the participants believed this contributed as a factor to integrating IT and OT in the context of their experiences. The interpretation of organisational structure has been simplified into two main constructs. In the context of the interviews conducted and this research, a flat or simple organisational structure is one where there are less than three reporting lines between the most junior member of an organisation, or a division of an organisation, and the most senior member. A complex structure is one where there is greater than three reporting lines between the most junior and senior members. It was reported that complex organisational structures were often inhibitors of IT / OT integration and those that had more complex structures appeared to have greater tensions when integration IT and OT (see Section **Error! Reference source not found.** for more on tensions). It was found that the

greater the complexity of the organisational structure, the greater the challenge of IT OT integration appeared to be.

The challenges of communication and clarity of organisational priorities are associated to how the IT and OT teams were structured within each of the organisations. In the organisations that had flat structures the participants reported there were less opportunities for an ‘us and them’ mentality and the formation of organisational silos, whether the silo was an artefact of the organisational structure or formed as result of "high formalisation derived from the strict adherence to formal rules and regulations” (María Martínez-León & Martínez-García, 2011, p. 544)

Conversely, in higher complexity structure there was a theme of organisational silos because of organisationally and geographically dispersed IT and OT teams, which often resulted in a separation and misalign on organisational goals and priorities.

There were various occasions where having the IT and OT teams mutually located in the same space seemed to bear a significance in the project or initiative tensions. It has been argued that a larger occurrence of task and interpersonal conflict and a reduction of cross-functional cooperation can be associated with having teams distributed rather than collectively (Edmondson & Nembhard, 2009).

This section explored the how organisation's structure is a factor on the integration of IT and OT and explores the experiences of the participants when evaluated against a complex structure and a flat or simple structure. The next section outlines the findings as they relate to leadership and governance.

Theme 3: Leadership and Governance

This section explores a theme that also emerged from the identification of those structures. The effectiveness of the governance and leadership approach in relating to the IT OT initiatives that were being undertaken. It was observed that in organisations that had complex structures and large power distances, there were often challenges and tensions associated with the delivery of IT OT initiatives. However, there were cases outlined in organisations with flat structures, if governance and leadership was not clear and congruent, this can could also prove challenging for those implementing the initiatives.

These were challenges reported by participants who operated in complex organisations, where there was often a misalignment of business goals, and although there were clear directives provided from the executive level, this was not always enthusiastically adopted by the IT OT integration personnel.

It was found that governance and leadership was an observable theme when understanding the experiences of the participants. When the organisational direction was clear, and this clarity appeared to influence the acceptance of the initiatives positively, where contrarily where there was ambiguity from their leadership there was the appearance of resistance from the integration teams.

Theme 4: Communication

As outlined in the previous section when discussing the themes as they related to governance and leadership, communication was another recurring theme in the experiences of the participants. These themes are closely related, while having effective leadership was seen as a key factor in a number of instances above, as was the effectiveness of the communication that preceded and subsequently followed initiatives. Although a broad term, communication as a theme took various shapes as it was interpreted in this research. For example, the range included communication from leadership to intra team's communication during project establishment. This was not seen to be a new or novel challenge (Edmondson & Nembhard, 2009) when integrating different disciplines and technologies.

Clarity of the communication was key to the stakeholder understanding what was going to change, and the impact those changes may on them.

It was understood that even with clear governance and leadership, communication is an important factor in ensuring the stakeholders have a clear understanding of the impact and implications of integration.

Theme 5: Tensions

When initially scoping the potential participants for this research, I queried if they witnessed or experienced tensions or resistance between IT and OT. Almost universally there an agreement that these tensions existed. What became clear

through the interview process is that these tensions and the way they manifested where as diverse as the environments in which they had been experienced. This diversity of tensions has been grouped into 4 sub-themes; People, Metric and Goals, Technology, and Governance.

Sub-Theme 5.1: People

Understanding the source of any tensions provides insights into what may contribute as factors and challenges associated with the integration of IT and OT. People and personnel are key factors of integration. It was held that technology is not the source of tension, but rather people. “I think at the back of that, nearly every time 99 percent of the time it's a people issue that’s preventing these things actually being successful”.

Sub-Theme 5.2: Metrics / Goals

The misalignment of metrics and goals is another observation as to the cause of tensions in IT and OT integrations. When discussing the goals of IT and OT, there are clear differences as to the goals and success factors between these disciplines.

Tensions were created from a lack of confidence in the ability of the IT integration to meet and address the goals of the OT stakeholders.

Sub-Theme 5.3: Technology

Tension with technology integration is not unexpected. This is especially true in project contexts where there are several competing forces at play including budgets, time and resources.

Sub-Theme 5.4: Governance

Governance and leadership are significant sub-themes when examining the interviews. When integrating organisational silos, breaking down barriers and introducing change, organisational support from leadership was seen to be a fundamental aspect to the success of the initiative.

When exploring some of the barriers to IT and OT integration OT centric organisations with very deep traditional ways of working, and an older work force, the barriers appeared to stem from the leadership itself when asked if the organisation was the biggest barrier to integration.

Another example was evident that the complexity of the organisation coupled with the lack of clear governance from leadership lead to a lower than expected interest and adoption from the OT individuals.

There are a range of tensions that arise from the integration of IT and OT. These tensions stem from people and how they respond to their changing environment and the introduction of new processes. The misalignment of goals and metrics was a significant theme when evaluating tensions. These included both the

alignment of organisational metrics as well as alignment with each individual's goals and the appreciation of change impacting on their environment. Although tensions as a result of technology itself was expected to be a significant feature of the tension, there were several minor examples, but these were not interpreted as technology specific, but project related realities.

Conclusion

This chapter has examined the findings from the interviews and broken these findings down into five themes; (1) Interpretation of Key Terms, (2) Organisation and Team Structure, (3) Leadership and Governance, (4) Communications and (5) Tensions. Included in the five themes were six sub-themes. Interpretation of key terms was further expanded into two sub-themes exploring the interpretation of "IT" and "IT and OT Integration" The tensions theme was also broken down into four sub-themes; People, Metrics and Goals, Technology and Governance.

Discussion

This chapter now discusses the findings with regards to the two research questions outlined in Chapter One. Discussed in the previous chapter were the findings and themes that stemmed from the thematic analysis of the interviews.

This chapter discusses the findings as they relate to the research questions outlined in Chapter One:

1. *What are the factors influencing the integration of IT and OT teams?*
2. *What are the challenges influencing the integration of IT and OT teams?*

As the integration of IT and OT is a relatively new phenomenon, literature addressing the factors and challenges of integrating IT and OT has been largely unexplored with the exception of articles examining the technical challenges of integrating IT and OT (Harp & Gregory-Brown, 2015; Murray et al., 2017) and several periodicals identifying the inherent tensions between IT and OT teams (Brocklehurst, 2017; Wakim, 2018). It was found that the factors and challenges of integrating IT and OT teams follow similar themes as those outlined in the literature review and by exploring the experiences of the participants were able to identify the key strategies that could be employed to reduce the tensions of integration. The first theme explored was the interpretation of key terms: 'IT' and 'IT and OT integration'.

Communication (Establishment of a common language)

One of the initial themes that emerged from the interviews was the differences in how each of the participants had different interpretations of the key term's 'IT' and 'IT and OT Integration'. It was found that the interpretation differed between participants and that this difference was identified as being based on the context of participants environment or the context of their experiences.

As explained by Fellows and Liu (2016) sensemaking is a process in which individuals construct meaning from the processes and signals of their world view. As the context of the interviews was centred on IT being integrated or introduced into an OT environment those participants with an IT background would discuss their experience with factors and challenges associated with OT people and teams. IT to these participants is an entire system of people, protocols and specialisations. Conversely, the experience of the participants with an OT background was about the impact of the technologies and processes being introduced into their OT environments. IT personnel, although a requirement of that integration, did not feature as significantly as the technology itself during the interviews with participants from an OT background.

- Organisational Culture (Teams in silos)

A key factor to integrating IT and OT teams related to the organisations culture and how existing departmental silos between the IT and OT was seen as a factor when integrating IT and OT. These disciplines have traditionally been divided, into teams or technology and information (Lara et al., 2018) and therefore, the discovery of organisational silos was not unexpected. Where successful organisations, or departments, have a strong identity and a unitary culture, they will be prey to dominant logic and resistance to change (Jarzabkowski, 2004) which are characteristics of organisational silos. “Communities that have a largely stable membership, with limited external networks and few crises or problems, are liable to engage in recursive practice” (Jarzabkowski, 2004, p. 537).

Organisational Structure

Mintzberg (1993) defines the structure of an organisation by the 'sum total' way in which its labour is divided into distinct tasks that allows coordination to be achieved. The structure provides the scheme as it relates to people, processes, communications and systems and therefore the structure may facilitate or impede an organisations capacity to adapt to change, learn and innovate (María Martínez-León & Martínez-García, 2011). It was found complex organisational structures often experienced challenges when integrating IT and OT.

Integration initiatives in complex structures suffered from mixed interpretations relating to the organisational directives and priorities. The challenge related to how the message of the importance of the integration and therefore the training was being handed down through the organisation and the importance the OT engineers placed on that training. The result was low adoption, or resistance to the initiatives and training. From a strategy as practice perspective, the meso praxis of the example organisations is somewhat aligned to the mechanistic structure proposed by Burns and Stalker (1961).

Conversely Burns and Stalker (1961) proposed organic organisational structure. Features of an organic structures include; flat organisational hierarchies where "vertical decision making with replaced by horizontal collaboration" (María Martínez-León & Martínez-García, 2011, p. 544), teams are based on knowledge and expertise rather than the operational contribution and proactive participation of employees in organisational management (María Martínez-León & Martínez-

García, 2011). It was found that an organisation with the features of an organic structure adapted to the integration initiatives. This is supported by Jarzabkowski (2004) who explains that a countenance of an organisation with adaptive practices has features such as social integration between practices, and knowledge distribution and transfer, which are features of horizontal collaboration.

Governance and Leadership

At various points during the interviews there was a statement with regards to the effectiveness of leadership, or governance, relating to the implementation of the IT and OT initiatives. This effectiveness was either noted in how successful leadership was at communicating the importance of the initiatives through the organisation, but also how effective leadership was at ensuring the messaging was being accurately interpreted by the personnel involved. This challenge generally manifested during the integration initiatives with a phrase from OT engineers along the lines of "we've always done it this way, why do we need to change". Agents who's practices and praxis are subject to and learnt through formal operating procedures, and highly routinized actions that may exhibit recursive behaviours as arising from the need for ontological security (Giddens, 1984; Jarzabkowski, 2004).

These challenges maybe addressed with the establishment of shared outcomes and shared accountabilities. It was found by Aapaoja, Herrala, Pekuri, and Haapasalo (2013) that deeper collaboration can be achieved when the team has an environment of shared risks, profits and outcomes.

Conclusion

This research aimed to understand the influencing factors, and associated challenges of integrating IT and OT teams. Extant literature curiously provided little empirical evidence about the makeup of an IT OT integrated team and the factors that contribute to team IT OT integration. With that dearth of literature discussed in my literature review, my research sought to address two research questions to make theoretical and practical; contributions to the literature. My two research questions were:

1. *What are the factors influencing the integration of IT and OT teams?*
2. *What are the challenges influencing the integration of IT and OT teams?*

Addressing these questions my research found that were five main themes relating to the IT OT integration culminating in four strategy categories that could be employed prior to integration initiatives. By using a 'strategy as practice' lens (Jarzabkowski, Smets, Bednarek, Burke, & Spee, 2013) this research provides insights as to the practices the practitioners witnessed and the praxis implemented during IT and OT team integration initiatives.

The practice lens provided insights into the implications that organisational structure and established communities of practice can have on the an organisations ability to adapt to changes in their environment at both a meso and a micro level (Whittington, 2006).

The interpretation of the key terms was unexpected finding of this research. It was interesting that participants who identified as coming from an IT domain associated the integration of IT and OT with people and teams. Conversely, the participants who identified themselves as OT aligned associated integration with technology and regarded the people element as secondary to the technology aspects of integration. This is key when understanding the influencing factors of team integration as resistance from OT personnel was understood to be a contributing challenge to IT and OT team integration as to the application of an appropriate strategy as outlined below.

The strategies identified in this research reduce the challenges and tensions while promoting contributing factors include; establishing a common language to reduce interpretation and ambiguity, co-locating IT and OT teams to reduce the barriers to communication and encourage teamwork, understanding the limitation that the organisational structure introduces to integration initiatives, and how understanding these limitations of governance and leadership communications can impact and influence integration initiatives through the misalignment of priorities and not establishing common goals.

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Impact of Hotdesking on team cohesion

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Introduction

Since achieving an eight-hour working day in 1840, New Zealanders have fought for the rights of better working conditions. The futuristic condition of contemporary business offices offers a variety of environments that adapt to individual needs and provide tailored spaces. In order to create these harmonious working environments, office architects have leveraged years of human study to offer premium conditions. These spaces are designed both to retain employees and reduce operational costs. Some businesses are highly regarded and pursued as employers, purely for the office working conditions and employee flexibility.

This research focuses on hot-desking, which has come to popularity principally to reduce office space requirements, thus providing relief from one of the highest business costs, real estate for the accommodation of employees. A recent study indicates that up to 40% of offices are empty, indicating that there is an over-subscription of space to those who are required to use it (Sander, 2017). The

second driver for hot-desking is to enable activity-based working, therefore facilitating improvement in individualised workspaces.

Hot-desking allows a company to have significantly smaller premises by providing a reduced number of desks compared to the number of employees. On arrival each day employees choose a location that suits their requirement for the day.

The Purpose of this Study

The purpose of this study is to determine if hot-desking affects cohesion in project teams. In order for projects to be successful they are often established quickly and have expectations of meeting milestones in a timely manner. Team elements of forming, storming and norming happen at an accelerated rate and expectations are that the team "hits the ground running", especially when there are high cost contract personnel involved.

Whilst some research has been conducted by Hirst (2011), Morrison and Macky (2017) and Skogland (2017) on hot-desking and whether people 'like' it, very little research has considered how it affects the team bond and the ability to move tasks quickly. Anecdotal evidence suggests hot-desking is abandoned during the course of projects to 'get people together' to move projects faster. Whenever there is a major decision or incident to be resolved, teams are forced into a room together to collaborate on resolutions. The question must be asked, why are people put together into a 'war room' to work on issues, if disbanded

accommodations are sufficient for the forming of cohesive projects teams in the first place?

The objectives of this research are to:
Investigate whether employees feel marginalised by hot-desking. This provides an opportunity to test the theories conducted by previous researchers and corroborate or add to the body of research.

Determine *if* team project team members believe that team cohesion is impaired by hot-desking. A review of recent literature indicates that impairment of project team cohesion has a flow-on effect to the success of the team. If this proves to be true in a New Zealand context, then the cost savings made by reducing desks could be lost in project delays.

Determine *what* causes team impairment in a hot-desking environment. Understanding what causes issues for project teams in hot-desking environments will offer opportunities to make other changes to support team success, if hot-desking is inevitable.

Determine *if* the preference to speak to someone in person (strong tie communication) is related to age. Some research indicates that the preference for face-to-face communications is age related. If this proves to be true, and the barriers to hot-desking are related to communications methods, then hot-desking could potentially be an age-related issue.

Background

The history of office layout commences with a Taylorist view in the early 1900s and culminates with the casual office environments of the 2000s that include hot-desking (Morgan Lovell, 2017).

According to Morgan Lovell, a prominent office fit-out company in the UK, the current popular view of providing a hot-desk environment was first introduced in the early 1990s. Chait-Day, a large advertising company in Los Angeles, known for their collaborations with Apple, introduced hot-desking as a hip, new 'way of working' in 1993 and abandoned the practice a year later due to loss of innovation and team collaboration (McCormack, 2016).

As time has gone on, corporations have embraced hot-desking as a cost saving exercise and provided hot-desking neighbourhoods for large portions of commercial offices. Ratios of 7/10 or 8/10 are often used to determine the correct number of desks to provide for permanent staff (Walter, 1992). By implementing hot-desking environments, employees can occupy spaces that are designated for 20% to 30% more people (Skogland, 2017).

Current research (Hirst, 2011; Morris & Macky, 2017) and recent media (Sander, 2017), indicate that whilst hot-desking may be reducing capital investment needed for accommodation, enough desks are never provided and the layout may not consider the human factors required for job satisfaction and working together

as teams. Further to this, Morrison and Macky (2017) conclude that unhelpful behaviours are exhibited by those working in hot-desking environments.

There is little research on the impacts of hot-desking on workers and, most important for the current study, no analysis of the impact of hot-desking on project teams that have higher than normal expectations for on-time delivery (Cohen & Bailey, 1997).

Literature Review

Cohesiveness

Team cohesion is defined as a group actively working together to achieve a common goal (Mullen & Copper, 1994). Robust findings in academic research agree that group cohesiveness is positively related to overall team performance (Cohen & Bailey, 1997; Mullen & Copper, 1994; Festinger, 1950; Gully, Devine & Whitney, 2012). Scholars (Evans & Dion, 2012; Festinger, 1950; Lawler, Thye & Yoon, 2000; Mullen & Copper, 1994) reasonably expect that a cohesive group will exhibit successful performance and that informal social communications (Festinger, 1950) aid in the formation of robust teams.

Lawler et al. (2000) discuss the theory of relational cohesion. This theory claims that team bonds are reinforced by positive exchanges that reoccur over time and team members actually become more committed to each other. Person-to-person bonds grow stronger as uncertainty between members decrease (Lawler et al., 2000; Mullen & Copper, 1994). Team members want to stay in positive groups

(Festinger, 1950), and the whole group will benefit from positive daily transactions with each other. These transactions also build strong group ties (Lawler et al., 2000) and create cohesion. Festinger (1950) found that informal social exchanges build stronger ties and increase the bondedness of teams, whilst Mullen, Anthony, Salas and Driskell (1994) conclude that members will adjust their behaviour over time to fit the group. Research indicates that interpersonal attraction and feeling of group pride is not enough to create a feeling of cohesion for team members and is not enough to encourage members to remain in teams in which they are not fulfilled (Mullen et al., 1994).

Social Exchange

George Homan, an early theorist and sociologist, defined social exchange as "the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons" (Homan, 1961, p.13), Other scholars argue that team bonds form over time and include the elements of trust, co-operation and reciprocal behaviours that drive bonded person-to-person and person-to-group relationships (Lawler et al., 2000; Blau, 1964). A key to social exchange theory is the endowment of obligations on others by interacting in an interdependent manner to achieve mutually beneficial outcomes, whilst creating positive emotions (Cropanzano & Mitchell, 2005; Blau, 1964; Lawler et al., 2000). Frequent social exchange causes a strengthening in the bond between people (Lawler et al., 2000) and informal communication adds to the cohesion of a group (Festinger, 1950).

When relating project teams to social exchange, consideration is given to productive exchange, in which interactions are by agreed dependencies to common tasks, or outcomes that require collaborations of more than one person (Molm, 2010; Lawler et al., 2000). Lawler et al., (2000) consider that productive exchange also includes "flow of contributions from the person to the group, and the flow of the rewards are from group to person" (Lawler et al., 2000, p. 618). In project teams, productive exchange relates to common deliverables and outcomes that rely on the whole group working together in productive exchange to reach the common goal. Although multiple persons are involved in productive exchange, direct or dyadic exchange amongst members creates unity and it is this unity that creates the overall commitment to the group (Lawler et al., 2000).

Social exchange emphases the mutual exchange of benefits for group members and attests that group unity comes not only from these common benefits, but the increase of positive interactions, the reduction of uncertainty and the creation of reciprocal interdependence (Blau, 1964; Cropazono & Mitchell, 2005; Molm, 1994; Cheshire, Gerbasi & Cook, 2010).

Uncertainty

A mutual direction based on commitment to the task (Mullen & Copper 1994; Gully et al., 2012) aids the cohesion of a group, and team members moderate their behaviour to 'get along' with others to meet the common goal (Mullen & Copper, 1994). Becoming familiar with each other in a team environment creates a reduction in uncertainty and the frequency of exchanges ensures the action of the

team members become more predictable and the natural level of uncertainty decreases (Lawler et al., 2000).

Reciprocity

This leads to analysis of the theory of reciprocity (Cropanzano & Mitchell, 2005; Deckop et al., 2003; Cheshire et.al., 2010; Molm, 1994; Blau, 1964; Bearman, 1997; Falk & Fischbacher, 2006; Axelrod, 2011). Reciprocity is the theory that people offer a behavioural return based on their interpretation of the intent and consequence of the actions of others (Falk & Fischbacher, 2006). The theory is often discussed in relation to game theory and concludes that one act of kindness deserves another. In a project environment, team member actions are contingent on how they are treated by other team members (Cropanzano & Mitchell, 2005; Axelrod, 2012)

Team Success

There are many academic articles and research on team success (e.g., Liu & Cross, 2016; Knights & Willmott, 2012). Liu and Cross (2016) offer recent research on project team success factors and conclude that team cooperation has a significant impact on results. In addition to a cooperative project team, harmony, strong leadership and defined goals were critical to project team success. If harmony and cooperation strongly underpin project team success, then an aversion to the socio-spatial work environment could hinder the success of the team (Hirst, 2011).

Due to the nature and complexity of the work, teams are usually collocated. Cohen and Bailey (1997) find that "teams high in cooperation relied more heavily on informal modes of communication" (p. 264), again supporting Festinger's (1950) theory of the value of informal social exchanges.

Communication Frequency

Waber, Magnolfi and Lindsay (2014) provide insight into the importance of face-to-face 'collisions' to improve worker performance and provide space for innovation. Waber et al. (2014) maintain that face-to-face communications are the single most important interaction in the office environment. Inadvertently, Waber et al. (2014) corroborate the need for social exchange in an informal manner (Festinger, 1950), to heighten innovation and increase team productivity.

The Allen curve (Knights & Willmott, 2012) suggests that communication is four times more frequent when people sit in close proximity to each other and communications are far less likely with someone sitting at a greater distance (Waber et al. 2014). The decrease in face-to-face communications in the modern office has not driven an increase of communications by other modes. Research by Allen and Henn (2006) indicates that if person A does not normally communicate with person B face-to-face, then person A is just as unlikely to communicate with person B through other communication methods.

Theory of Weak and Strong Tie Communication Methods

In contrast to Waber et al. (2014), Katzy, Stettina, Groenewegen and De Groot (2011), offer their views on new styles of working. Katzy et al., (2011) discuss the management of weak ties and strong communication ties with employees. Their research shows there are different ways that people bond to each other and form relationships. Strong communication ties are necessary to bond deeper relationships and are contact-intense, whilst weak ties are superficial, have less personal contact and can be likened to 'friendships' on Facebook; friends are still connected, but may not have an enduring, deep personal relationship (Katzy et al., 2011).

In the office environment, there is a belief that person-to-person contact is needed for better performance and to solve problems. The younger generation seems to favour weak ties and expect communications to be electronic, and do not seem to care if they never meet their colleagues face-to-face (Katzy et al., 2011).

Hot-desking

Millward, Haslam and Postmes (2007) reviewed and tested assumptions on how attachments are made to each other and organisational entities. Their research indicates that employees with assigned desks have stronger team ties and a lot more face-to-face communication than those who are in hot-desks.

Often hot-desking means teams are not collocated and employees work next to people who are strangers, or are not working on the same project as them. Rather

than encouraging the networking opportunities it was purported to do, hot-desking may actually create fewer interactions (Waber et al., 2014).. Research completed by Goffman (1971) may explain that in a hot-desking environment the act of 'civil inattention' could exist. Civil inattention is a mechanism Goffman attributes to large city dwellers who avert their eyes to show virtual strangers that communication is not expected. In a hot-desking environment, when parties are not known to each other, then communication is limited, eyes are down cast and nothing more than polite nodding is appropriate.

Lastly, Hirst (2011) offers that there is a sense of marginalisation that comes from the almost inevitable consequence of hot-desking, when the employee has been unable to carve out a semi-permanent space to use on a daily basis.

Research Design

The objective of this research is to determine if hot-desking prohibits free flowing communications in project teams, interrupts social processes and puts team cohesion at risk. A conclusion from the literature is that a diminution in team cohesion ultimately reduces the productivity and success of the team.

Research Method

A qualitative survey approach has been selected as the method for this research. This method enables diversity of responses from a wider population sample and is able to elicit specific data on the experiences of persons working in the socio-spacial construct of hot-desking. (Corbin, J., Strauss, 2008). The survey will drive

answers from respondents to challenge whether hot-desking issues can be attributed to the sociological patterns observed in current theory including the reality of social exchange theory, reciprocity and uncertainty reduction. (Lawler et al., 2000, Cropazono & Mitchell, 2005; Molm, 1994; Cheshire, Gerbasi & Cook, 2010).

Within the qualitative questionnaire, a supplementary quantitative, age-related question is collected to determine if a preference for strong or weak tie communications has an age related relationship (Bryman & Bell, 2015).

Data Collection

Data are gathered via a questionnaire that is distributed in an on-line survey format. The questionnaire is offered specifically to those who meet minimum criteria of working in project teams and in hot-desking environments.

Questions are requested in long and short form answers and offer the participants an opportunity to express their thoughts in their own words.

No personalised data have been gathered.

Sampling errors are likely to be low given that participants are self selected and the survey-built questionnaire ensures that only people working in desired conditions are eligible.

Data Analysis

Thematic analysis has been selected as the best approach to analyse the data for this particular type of research (Bryman & Bell, 2015). Responses are allocated to emerging themes and grouped to provide context for analysis, interpretation and discussion.

The structure of the questionnaire to support a qualitative study means there is risk of variability in the interpretation of answers provided in an open-worded manner (Bryman & Bell, 2015). To reduce the risk of variability in the interpretation only one researcher is coding the data collected.

Demographic data are gathered to determine if preferences for face-to-face over electronic communications is related to age. A simple quantitative table is used to depict the outcome of responses.

Results

Survey results

The on-line survey was produced in SurveyMonkey and distributed via Facebook, LinkedIn and email messages. Respondents were asked nine questions in the survey questionnaire. Sixty-three persons responded to the survey over a five-day period in early July 2018. Consistent themes that emerged in the analysis of the data have yielded four key concepts.

Age relationship to face-to-face communication preference

The first aim of the research was to determine if the respondents prefer face-to-face communications over instant messaging, email or phone. The age of the respondent was collected (question 2) to determine if there is a relationship between the age of a person working in a hot-desking environment and the propensity for face-to-face communications (question 3). The data show that 58 respondents are aged between 23 and 64, with two respondents declining to provide their age. 73% of respondents prefer face-to-face communications over instant messaging, email or phone. Interestingly, only 40% of respondents between the ages of 23 and 35 prefer electronic methods of communication over face-to-face interactions. As Table 1 indicates, the highest preference for face-to-face communication is the 36 to 45 age band, with 81% of respondents declaring a preference for face-to-face communication over alternatives.

Table 1: Face-to-face communication preference

Age bands	**Participants**	**Face-to-face Preference**	**Percentage**
23-35	10	6	60%
36-45	16	13	81%
46-55	28	21	75%
56-+	4	2	50%
Decline	2	2	100%
TOTAL	60	43	73%

* indicates age preferences for face-to-face communications

The positives of hot-desking environments

Question four of the survey asked respondents what they liked about working in hot-desking environments. A large group of respondents (n=26) agreed that flexibility is the primary driver behind a positive attitude to hot-desking. with the team members my work for the day will be focused on the most".

Interestingly, of the 26 respondents who agreed that flexibility was a primary reason they liked hot-desking, five (19%) believe that hot-desking allows them to sit with their own team and relates to an expectation that there are always enough desks to sit where you want or need to. Responses to question reveal that 16 respondents work in environments where there are always enough desks and the majority of respondents do not.

Another popular answer to this survey question was that 13 respondents did not like hot-desking at all. Initially respondents didn't provide qualifiers to this statement, but on review of their whole survey, the dislike stems from seven respondents who can't find a desk in the morning, four who cannot sit with their team, four who agree that setting up and clearing up desks each day is tedious and unproductive and two who believe that you have to get in early to sit where you want to or get a desk.

What respondents did like was networking with other teams and workers in other areas (n=13), that there are greater collaboration opportunities to work with others (n=4), the ability to escape from the team (n=3) and lastly, having a clean and

clear desk (n=2). Of note, is that of the 13 respondents who liked the idea of networking, three of those respondents were referring to networking within their own team and did not consider that they would not be able to sit with their team members. Of those who believed there were greater collaboration opportunities (n=4), two were referring to working with other members within their own team. Overall, 12 respondents believed that hot-desking provided an opportunity for collocation of teams and the opportunity for teams to work together.

The negatives of hot-desking environments

Interestingly, 30 (50%) of respondents could not find a desk on a daily basis or professed to having difficulty finding a desk. Eleven (18%) respondents agreed that early starters are at an advantage to those that could not start early. P43 offers "that as a parent you are disadvantaged by having to drop kids off and not being able to get in at the crack of dawn to get a good seat... or a seat at all". This sentiment continues with 17 respondents disliking that the team cannot be located together, which produces a direct argument counter to the 12 respondents who believed that hot-desking provides opportunities for teams to work together. Interestingly, no respondents were concerned with sitting a specific desk, just that it was located with their own team.

Other dislikes range from having to clean and clear desks each night (n=10) and carrying belongings around (n=8) to challenges finding people (n=8), impersonal work spaces (n=8) and disdain for those that reserve desks for their friends / colleagues (n=4). Others discuss unwelcoming atmospheres (n=4) and missing

out on informal information that comes from collocation with your team (n=4). P38 considers dispersed seating arrangements "doesn't build team morale, and means you miss information."

When no desks are available

When respondents were asked in question six how they felt when they couldn't find a desk, there was a resounding agreement of frustration and annoyance (n=25). Eight respondents felt that they were unproductive whilst packing up belongings, cleaning desks and wandering around to find vacant spaces. On the other hand, 16 respondents were not concerned and always found a desk to sit at, or were comfortable on a mobile device if no desktop was available (n=7).

What is interesting in responses to this question is the feelings of being undervalued (n=7), shamefulness (n=3), self consciousness (n=1) and an effect on self worth (n=1).

Communications between project team members in hot-desking environments

The majority of respondents agree that the communications between project team members are improved if the team is collocated (n=39), with (n=10) respondents believing significant time is wasted wandering around the building looking for team members. There is some agreement that face-to-face meetings save time (n=13) and complex discussions can only be had face to face (n=1). Some respondents feel that decisions are faster when people get together to discuss

matters, rather than trying to communicate electronically (n=5) and issues are resolved in a timely manner when people talk together (n=2).

Respondent P15 is concerned that sitting beside workmates makes for a "less productive day". This concept resonates with other respondents that offer the challenge that not having a workmate nearby reduces bonding (n=2).

Those respondents that are happy to receive electronic communications only (n=1) or don't believe that sitting together or apart affects project team communications (n=3), still agree that communication is easier if teams are situated together. Informal and impromptu (n=8) communications are regarded as necessary to ensure team members are well informed on developments or changes.

Impact of hot-desking on team bonding

The need for casual conversations is also a topic when discussing team bonding. Ten respondents agree that casual conversation builds relationships and promotes team bonding. This theme is extended by another nine respondents who agree that incidental bonding is affected by not being collocated with the team. Seven respondents state that personal bonding has been hindered since a move to hot-desking and 11 other respondents agree that bonding cannot occur in dispersed seating accommodations where teams cannot collocate. The positive benefit seems to be that team members that are not well liked can be avoided as

colleagues are not obliged to sit with them (n=2), but closer relationships are put at risk if teams do not remain together (n=3).

In a catch-all question at the end of the survey, respondents were asked if there was anything else they would like to offer about working in hot-desking environments. Three respondents felt all would be right with the world if there were enough desks and two believed that the loss of productivity in packing up belongings and cleaning desks was the main objection to hot-desking environments.

Discussion

Age relationship to face-to-face communication preference

The survey results reveal that 60% of the 23-35 age group (i.e., Millennials) indicate that face-to-face contact was their preferred method of daily communication. When isolating the surveys of the individuals that had a non face-to-face preference in this age group, we find that 50% of those individuals believe that informal chatter and the inability to sit with their team would adversely affect team bonding. Although Katzy et al. (2011) found that the younger generations favour weak tie communications, the Millennials in this research agree that building teams, creating bonds and solving problems are easier done face-to-face.

Four key concepts

Four key concepts were emerged from the research data; Feeling marginalised, team communication, team bonding and unproductive activities.

Feeling marginalised

Workers in this survey and in the research of Hirst (2011) agree that they don't feel good about their social status when trying to find a desk, or sitting next to people they don't know. I believe that some respondents couch this dislike as not wanting to be 'unproductive' but I would argue that it stems from a more human need tied to social exchanges of reciprocity and uncertainty reduction. No-one wants to arrive at work each day and not know if there is a seat for them. Respondent 45's reference to the socio-cultural phrase of 'the walk of shame' summarises this appropriately (i.e., "Frustrated and feel like I do the walk of shame around the building"). If co-workers are not responding kindly when people are walking around looking for desks, then reciprocal exchanges are unpleasant and this affects trust of each other (Cheshire et al., 2010). Certainly, in Hirst's (2011) research there is a mention of development of distrust between workers and this is directly related feeling unwelcome when searching for desks.

Team communication

Thirty-nine respondents (65%) of this survey agree that teams communicate better when they are collocated. P56 proposed "a key part of team comms isn't the things that are discussed in meetings - it's the things you hear across the desk when other people are having a conversation, and you can chip in and provide

additional information. This relies on you having your team around you. With hot-desking your team is potentially dispersed into many different areas, thereby rendering these impromptu conversations impossible".

Incidental communications

Waber et al. (2014) found that teams seated in hot-desking environments report fewer person-to-person interactions, but when collocated they interact more frequently and productivity improves. Stawnicza (2015) supports this view and concludes that trust is build by face-to face communication, in turn creating a more cohesive team. Morrison and Mackay (2017) extend this by stating that a sense of distrust and uncooperative behaviour is evidenced by those not working closely to each other. The participants of the current research study are not just talking about casual chat; they are concerned about the incidental information that builds team success. P37 talks of the ability to organically absorb team information whilst gauging the well-being and energy of the team by working closely together. This respondent doesn't just allude to personal conversations and private jokes, but the fabric of team success by being able to gel with the team as an entity. Specifically, he/she says "You don't get the information by osmosis. That happens with a team sitting together - you pick up conversations around you. You can't see how the team is feeling and read people's body language. You don't build team morale". This is echoed in other responses. For example, P52 reports "Many a times communicating face to face saves a lot of time and clears miscommunication. While hot-desking might seem a good idea from a company's point of view, team co-ordination and communication goes for

a toss". P50 says "When there are adequate hot-desks, they provide the capability for flexibility and co-location that enables teams to form up around work effectively, reducing communication delays and fostering a spirit of common purpose".

Team cohesion is positively related to team performance (Cohen & Bailey, 1997; Mullen & Copper, 1994) and successful informal communications assist in forming strong cohesive teams (Festinger, 1950). It is obvious that if a person is not present, they will not hear what is being said, ergo informal messaging will have been missed, communication that could contribute to a discussion or decision. It stands to reason that a person could feel marginalised or undervalued if they are left out of team decisions constantly due to the location of their desk. Mullen et.al, (1994) promote their idea that free and frank discussion comes from high functioning teams that rely on their commitment to a shared outcome. With this shared purpose and a sense of comradery, relational cohesion is created and the team is more successful. This ties nicely to social exchange theory yielding common benefits and the creation of reciprocal interdependence (Cropanzano & Mitchell, 2005; Molm, 1994; Chesire, Gerbasi & Cook, 2010).

Team bonding and casual conversation

Casual conversation promotes sociability and creates friendly reciprocal arrangements. Those that have friendships within the office environment report improved well-being, including feelings of increased trust and co-operation (Morrison & Mackay, 2017). P52 agrees, saying "Bonding (as a team/project)

usually involves talking or doing something other than work. Bonding can include talking about hobbies, families, interests, etc. This is ultimately impossible if hot-desking". Not everyone comes to work to make friends, or even requires social relationships at work, but most would agree that life is easier if people are friendly within the team. This is repeated in the ideas of reciprocity where researchers believe, what goes around, comes around and successful exchanges cause feelings of goodwill and drive commitment to the team agenda (Cropanzano & Mitchell, 2005; George & Bettenhausen, 1990).

Unproductive activities

Thirty percent of the respondents to this survey provided instances of unproductive activities that they believed took them from core work and pushed them into 'house-keeping' type activities. These activities include packing belongings at the end of each day to adhere to the clean desk policies associated with hot-desking, to the physical cleaning of desks to dissuade the spread of illness. An article on small business activity in the UK reports a recent study completed by Initial Washroom Hygiene that found "microbiological activity is 18 per cent higher in hot-desking office environments" (Gough, 2017). Germ transference and the necessity to use anti-bacterial wipes aside, disenchantment in completing packing, unpacking and cleaning tasks does not sit well with survey respondents.

Conclusion

Previous studies have shown unfavourable results for the human element in the

hot-desking equation, but this is still not enough to dissuade this style of working.

Whilst this study can largely be linked to all types of teams, we chose persons that worked in project teams as they are usually in high change environments and likely to on-board new ideas quickly. Project teams are more likely to need to work together as a cohesive team to successfully manage tight timeframes and deliverables, making them ideal candidates to determine if dispersed seating arrangements are workable. This research provides a contextual view of why teams falter in a hot-desking environment and addresses the importance of the socio-spacial dynamic on the team construct within the New Zealand corporate environment. This study does not dissuade activity-based working and supports the concept of hot-desking with some considerations that would be useful for office designers and executives.

In answer to the research question, does hot-desking impair team cohesion? we suggest that in order for teams to be successful they must be cohesive, and in order for teams to be cohesive they must bond (Lawler et al., 2000). To achieve bonding people must have fulfilling reciprocal exchanges and feel good about themselves in the office environment (Cropanzano & Mitchell, 2005; Axelrod, 2012). Research participants enjoyed the flexibility of sitting where was best suited for the day, but felt they needed to participate in casual and incidental daily communications in order to feel properly informed and to create bonds with their teammates. Not only does casual and incidental communication create team bonding, it creates team cohesion, which drives team success (Cohen & Bailey,

1997). Respondents to this survey felt that bonding was hindered by the inability to collocate with their own team. Whilst some saw value in networking with others, the majority agree the benefit of hot-desking is getting to sit with different members of their own team and not the wider business network. To this end, we conclude that hot-desking is primarily successful if provision is made for teams to have the opportunity to sit together and there is a risk of lack of bonding and cohesion if they are not collocated.

Findings of this research (41% of respondents) indicate that the lack of desks in a hot-desking environment is a key barrier to hot-desking success. Social exchanges are fractious, breed dis-trust and cause the undesirable feeling of being unwelcome and undervalued when workers are unable to find a desk with their own team. This, combined with unproductive activities, contributes to feelings of marginalisation and answers the research question, do employees feel marginalised in hot-desking environments? We suggest that employees can feel marginalised when hunting for desks, performing low status tasks (Hirst, 2011) and feel excluded when not collocated with their own team. Notable in this context is, workers have less concern about hygiene factors of packing up and cleaning desks than they do about wanting / needing to sit with their teammates.

Lastly, to summarise what causes team impairment in hot-desking, we suggest a lack of bonding with team members may contribute to reduced team cohesion and subsequently contribute to reduced team success. This research revealed that workers in a hot-desking environment rely on casual and incidental conversation

and attribute those factors to team bonding. Not withstanding the above, an overall feeling of marginalisation that comes from lack of provisions for employees or contributing to perceived humiliation of desk hunting does not provide the social construct for team success.

Practical application of findings

As the push continues for offices to implement hot-desk spaces this research is valuable for the setting of hot-desking policy. Providing areas for project teams to collocate is important for cohesion. Barriers to project team cohesion rests with the adequate provision of desks for teams to work collaboratively. Overcoming these barriers can be made with a review of the allocation of spaces.

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