Innovative Work Behaviour:

The influence of multicultural identity, openness to experience and cultural intelligence

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Abstract

This research aims to conceptualise a response to global trends. The workforce is becoming more diverse and multicultural. If an employee is not culturally competent, conflicts will happen. Cross-cultural misunderstandings will cost valuable time to resolve, which will result in lowered productivity. A fast-paced digital and technological workforce require constant innovation to survive. If an employee favours the status quo and does not implement new ideas, the organisation will fail to remain responsive to the demands of global consumers.

This research study asserts that future successful employees will benefit from a multicultural identity because they possess a range of cognitive schemas, which allows them to think and express themselves from different perspectives. Multicultural individuals possess cultural intelligence, which allows them to collaborate sensitively and effectively with people from other ethnic backgrounds. Multicultural individuals are creative and proactive in implementing their ideas. Future successful employees will benefit from an openness to experience personality trait, which allows them to welcome new ways of conceptualising and doing things. Open-minded employees are likely to gain and share new knowledge from cross-cultural experiences.

The five constructs that are asserted to be crucial for the future of work are:

1) Social desirability testing

2) Multicultural identity

3) Openness to experience personality trait

4) Cultural intelligence

5) Innovative work behaviour

Drawing from anxiety and uncertainty management theory (AUM) and creative cognition approach, this study investigates the three constructs (multicultural identity, openness to experience, and cultural intelligence) on their contribution to innovative work behaviour. Students from the University of Waikato, New Zealand, participated in the research. This study selects participants on the basis that today's students will be starting work in the next few years. These students will be the demographics of the future workforce. The decision to use students as population sample contrasts with previous research that favours participants who are presently working in organisations.

The participants filled up an online questionnaire, which consists of four validated measurement scales. Distinct from other research of this nature is the inclusion of the Marlowe-Crowne 13 question social desirability scale. The aim is to reduce social desirability responding, increase the validity and robustness of the data set.

Findings showed that respondents who self-report as multicultural and bicultural have significantly higher cultural intelligence and innovative work behaviour scores, as compared to respondents who self-report as monocultural. However, differences for openness to experience personality trait scores are not significant amongst these three groups. Findings showed that socially desirable responding affects scores on openness to experience personality trait, cultural intelligence, and innovative work behaviour. Openness to experience personality trait, cultural intelligence and innovative work behaviour positively correlate with one another.

Cultural intelligence mediates between openness to experience and innovative work behaviour. Also, cultural intelligence mediates between multicultural identity and innovative work behaviour. This study also investigates the sub-facets that make up the overall openness to experience and cultural intelligence constructs and examine their relationship with innovative work behaviour. The ingenuity and curiosity sub-facets of openness to experience are essential predictors to innovative work behaviour. Also, the motivational and metacognitive sub-facets of cultural intelligence are significant predictors to innovative work behaviour.

The three practical implications of this research study are as follows:

1) Human resource managers may benefit from hiring employees who are bicultural and multicultural because they can think using different cognitive schemas and see different perspectives. They are more likely to work well with people from other cultures and are more likely to be creative. Multicultural individuals are likely to minimise the occurrences of cross-cultural conflicts. These individuals are likely to facilitate knowledge sharing and boost innovation in the workplace.
2) Human resource managers may benefit from selecting staff based on their openness to experience, cultural intelligence, and innovative work behaviour scores. This study hypothesises that employees who score higher on openness to experience may be able to welcome and immerse themselves in multicultural experiences, which may allow them to become more culturally intelligent. Openness to experience is a stable personality trait and are less likely to change over time. Monocultural employees, who score higher on the openness to experience personality trait are more likely to benefit from exposure to different cultures and cultural intelligence training. Employees who are higher on cultural intelligence scores are more likely to work effectively with colleagues from other cultural backgrounds. They may be more adept at learning, sharing knowledge, adopting good work practices that are tried-and-tested in other countries.

Employees who have higher innovative work behaviour scores may be more likely to exhibit behaviours in the workplace such as brainstorming and creating new products and process, which is likely to result in the innovative output of an organisation and give it a competitive advantage.

3) Human resource managers will benefit from using the Marlowe-Crowne Scale when screening prospective employees. Personality tests are used frequently in hiring processes, but they are susceptible to social desirability responding. The Marlowe-Crowne should not be used solely as a hiring tool, but prompt further questions during interviews or reference checks. The minimisation of social desirability responding is likely to improve the integrity of hiring processes, especially in organisations which have strong diversity and inclusion policies for staff to champion and be on board.

The limitation of this research study is its subjective self-report nature and cross-sectional design. This study has made efforts to reduce social desirability bias through the Marlowe Crowne scale. Also, it attempts to reduce common method bias by using different Likert-scale ranges for responses. Existing criticism of the cultural intelligence construct is its lack of an objective measure. There is new research that investigates biological and physiological correlates of the openness to experience personality trait, such as scans of functional connectivity in the brain, and heart rate. For future research, this study proposes the exploration of objective biological and physiological measures and its relationship to cultural intelligence and innovation.

This research study will contribute to cross-cultural, personality, diversity-inclusion, and innovation literature. There is existing literature that looks at the relationship between two constructs in-depth, but none as broad a scope as this current study, as it attempts to generalise a response to global trends. This study will provide the foundation for future exciting research.

Acknowledgements

The decision to embark on this research is a challenging one. It is time-consuming but always exciting. My passion is on learning about different cultures, all things innovative and creative. It is my interest. However, it would not have been possible without the support of those around me.

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Chapter One: Introduction

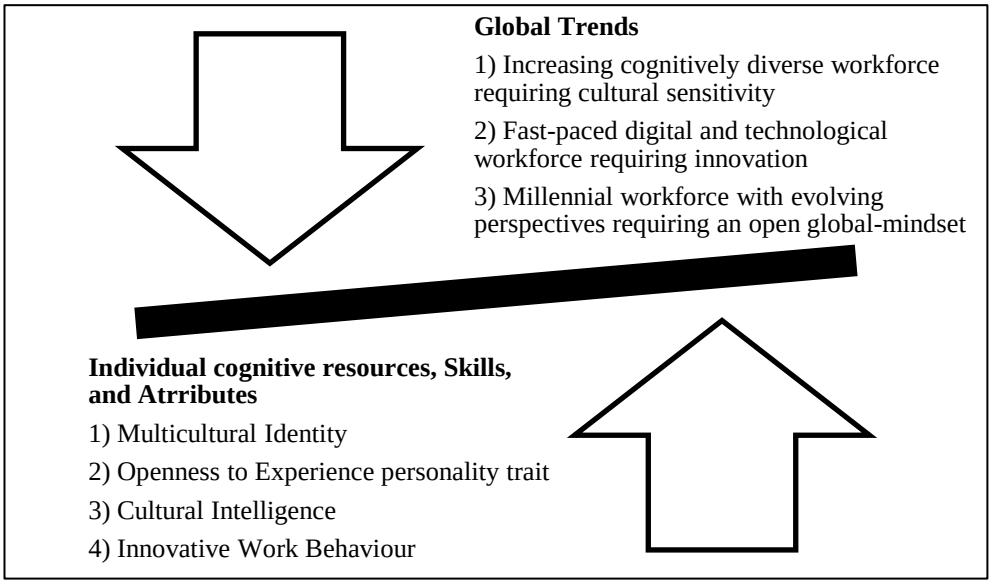

Figure 1. Illustration of the research premise

> It is not the most intellectual or the strongest of species that survives, but the species that survives is the one that is able to adapt to and adjust best to the changing environment in which it finds itself.
>
> — Charles Darwin, Origin of Species, 1859.

This research study aims to conceptualise a response to global trends.

1) An increasingly diverse workforce requires the ability to work with people from different cultural backgrounds. The common theme in 2018 United Nations general assembly speeches from world leaders was multilateralism. There is a need for different countries to work together for a common goal. This theme permeates local organisations as immigrant numbers in the workplace increase. At a firm level, cross-cultural misunderstandings may result in a wastage of time resources. Organisations that employ multicultural employees may benefit from their sensitivity to cultural cues and creativity. Monocultural employees may benefit from training in cultural intelligence and harness the potential of learning from other cultures. Cultural intelligence will minimise conflict, enhance knowledge sharing and boost innovative output.

2) A fast-paced digital and technological workforce requires constant innovation. Employees are supposed to think on their feet, generate new ideas, and implement them. They are increasingly required to be open to change. Workforce diversity is a boost to knowledge-sharing processes. Expatriates from a range of countries can contribute creative ways of doing things and adapt them to local practices. Less open employees may have more rigid cognitive systems and persist in doing things the same way. This rigidity may result in “not-invented-here syndrome” and group-think. In contrast, the employee who is open to experience is willing to accept ideas from external sources that are more effective. These employees are adaptable to the evolving global economy and are more likely to exhibit innovative work behaviour.

3) A millennial workforce, in an increasingly ageing population, which holds a different worldview to its predecessors, and has different expectations of culture will inevitably make up the demographics of the future workforce. This changing demographics relates to the use of predominantly student participants in the research because they are the ones entering the workforce in the next few years. The use of student participants contrasts with organisational psychology research that traditionally takes participants who are working in existing organisations.

This decision raises an issue. The younger college population may be susceptible to social desirability responding. Hiring processes often use self-report personality tests. The inclusion of the Marlowe-Crowne social desirability scale in this study can encourage its' usage by human resource managers or other personality researchers in the future.

This study adopts a future-forecasting approach. It is still exploratory and will attempt to make some predictions from the data analysis.

Theoretical Framework: The Two Theories

This research draws from two main theoretical approaches in explaining the relationships between multicultural identity, openness to experience personality trait, cultural intelligence, and innovative work behaviour.

Theory 1: Anxiety and uncertainty management theory (AUM)

The first theory is the anxiety and uncertainty management theory (AUM) (Gudykunst, 2005). Uncertainty is present during intercultural communications and causes anxiety for the individual. The theory posits that people perceive those from other cultures as "strangers." These “strangers” may behave in unpredictable ways. For the individual interacting with the other, the higher the uncertainty, the higher the anxiety. The theory posits that in such stressful encounters, individuals will use strategies to reduce uncomfortable feelings. In Nittaya (2016) study, domestic students utilised avoidance of international students as a coping strategy to manage uncertainty and anxiety.

Neuliep (2012) explained the interrelationships between uncertainty, anxiety, mindfulness, and communication effectiveness. Some people find it hard to predict how people from other cultures will behave and react toward them; hence the uncertainty (Gudykunst, 1993). During initial cultural encounters, the aim is to reduce the sense of uncertainty.

The minimum and maximum thresholds of anxiety and uncertainty an individual can experience determine how comfortable they will be in that interaction (Gudykunst, 2005). Uncertainty is dependent on the ability to predict the attitudes, beliefs, values, and behaviours of the "stranger" from another culture (Berger & Calabrese, 1975). Anxiety is the feeling of uneasiness and apprehensiveness. Anxiety influences an individual's desire to initiate or avoid communications, as in the case of the domestic students in Nittaya (2016) study (Gudykunst, 1995). Neuliep (2012) discovered that intercultural communication and ethnocentrism negatively impacts uncertainty reduction and communication satisfaction. Neuliep (2012) defines ethnocentrism as the view that one's group is the centre of everything and is superior compared to the outgroup (Neuliep, 2012).

The ethnocentric individual has rigid attitudes and behaviours. The ethnocentric individual is biased in favour of the ingroup, at the expense of the outgroup (Weber, 1994). They tend to avoid communication with people from different cultures, are generally not mindful, and have little motivation to reduce uncertainty (Neuliep, 2012). Neuliep (2012) posit that stereotyping strangers is an automatic cognitive process. The mindfulness aspect of AUM theory helps individuals to pay conscious attention to incoming information and attach the right meaning to it. Intercultural communication requires the appropriate interpretation of stimuli and being able to respond appropriately, in the way it was intended.

Mindful communicators are open to new information and processing new categories. If individuals do reduce uncertainty to manageable levels, mindfulness can then emerge to improve communication effectiveness.

During initial interaction, when uncertainty decreases, communication satisfaction increases (Neuliep, 2012). This mechanism links to multicultural identity, openness to experience, and cultural intelligence. Individuals who score highly on these three constructs are likely to be comfortable during intercultural communications. These individuals engage, learn and benefit from their cross-cultural encounters. Multicultural individuals feel comfortable interacting with people from other cultures. They are unlikely to view the other person as a “stranger,” because of their upbringing. The foreign is familiar to them due to the multicultural experiences they have had. The integration of their experiences constitutes their identity, and who they are as a person (Nguyen & Benet-Martinez, 2010).

Individuals who score high on the openness to experience personality trait feel less anxiety during cultural encounters. Chen et al. (2016) discovered that the openness to experience trait acts as a buffer against external cultural threats during a cultural-mixing activity and contribute to creative performance. Individuals who score high on this trait do not view stimuli from foreign cultures as intimidating.

Individuals scoring high on cultural intelligence feel less uncertainty and anxiety during intercultural communications (Presbitero & Attar, 2018). People are unlikely to experience anxiety and uncertainty during cultural encounters if they have a repertoire of knowledge, behaviours, and skills readily available for use during such contexts (Andresen & Bergdolt, 2017). Cultural intelligence serves this purpose by equipping individuals with the ability to function effectively in situations characterised by cultural diversity (Ang & Van Dyne, 2008).

Theory 2: Creative Cognition Theory

The second theory is the creative cognition theory. The creative cognition approach theorises that individuals break down existing conceptual boundaries to expand their cognitive schemas, and generate more creative thoughts (Crisp & Turner, 2011) Leung and Chiu (2010) assert that more open-minded individuals are prepared to approach people from different backgrounds with a learning mindset. It juxtaposes different cultural frames of mind, broadens the cultural knowledge base, and destabilises normative ways of sense-making and problem solving (Leung et al., 2008). Aytug, et al. (2018) confirms this by saying that people who have access to schemas and cognitive structures of multiple different cultures have a multitude of alternatives which they can use for problem-solving and increasing creativity.

Multicultural individuals internalise multiple cultural identities into who they are as a person (Nguyen & Benet-Martinez, 2010). Cheng, Sanchez-burks and Lee (2008) investigated the relationship between identity integration and creative performance. They discovered that individuals who have integrated more of their identities showed greater creativity functioning. They posited that psychological management of multiple social identities is related to accessibility of diverse knowledge domains. The abundance of knowledge influences the function of creativity. Hence, multicultural individuals who have cultural knowledge and have integrated their experiences are more likely to be creative. The creative cognition approach supports the cognitive characteristics of multicultural individuals, stating that the tendency to assess normatively inaccessible schemas is

essential for innovative conceptual expansion. Multicultural experiences prevent rigid thinking, expands the individual's toolbox of cultural schemas and boundaries, to be selected for use given a context (Leung et al., 2008).

Individuals who score high on openness to experience have an absorptive ability to combine and integrate new and unrelated information (McCrae & Costa, 1997). The creative cognition approach supports the innovative abilities of individuals high on openness to experience, suggesting that being able to utilise many different knowledge systems readily at hand, is vital for the creation of new ideas (Smith, Ward & Finke, 1995). Merging knowledge that appears to be unrelated on the surface is essential for creative performance (Rietzschel, Nijstad & Stroebe, 2007). Perry and Sibley (2013) confirm that high openness predicts greater cognitive flexibility, receptiveness toward counter-normative ideas, and leads to superior creative functioning.

Individuals who score high on cultural intelligence can adapt well to different cultural contexts (Earley & Ang, 2003). These individuals capitalise on the knowledge they have gained from their interactions with people from other cultures, process them into strategic insights and apply them to their innovative practices (Korzilius et al., 2017). Exposure to multicultural experiences may lead to the development of cultural intelligence. However, it can also work the other way around, where an existing level of cultural intelligence can effectively utilise the ideas gained from multicultural experiences. Informed by creative cognition theory, Leung et al. (2008) found that people exposed to multicultural experiences are more creative than those who are not. There are individual differences that influence this positive effect. Cultural intelligence serves as such an individual difference that will catalyse creative performance (Yunlu et al., 2017).

Integrating creative cognition theory and anxiety and uncertainty management theory, Zhou (1998) posits that the motivational facet of cultural intelligence drives individuals to overcome the fear of communicating with the "stranger." An individual with high motivational cultural intelligence will not feel anxiety but an intrinsic urge to interact

with a person from a different culture. This desire for “foreign” contact is related to creativity. The individual with multiple cognitive schemas must break through uncertainty and anxiety when pushing boundaries. The venturing into the unknown requires courage, leads to different perspectives, and helps in creating new innovative solutions.

Individuals scoring high on innovative work behaviour continually produce and implement new and useful ideas that benefit the individual, group or organisation (Bos-Nehles, Renkema, & Jannssen, 2017). De Jong and Den Hartog (2010) investigated four overlapping dimensions of innovative work behaviour, which are idea generation, idea exploration, idea championing, and idea implementation. Individuals who score high on innovative work behaviour tend to brainstorm, produce novel insights, develop them, get others interested, and then effectively apply them to their environment.

The creative cognition theory supports the creative processes of the innovative individual, positing that creativity is a result of two dynamic processes: generative and explorative. The generative process proactively searches and compiles relevant knowledge to generate ideas with different innovative potential. The generative process forms the starting point of any creative endeavour, where different themes can be integrated to create more complicated ones (Ward, 2001). The exploratory process evaluates these themes, decides which to retain, discard, undergo further modification, elaboration or transformation (Ward et al., 1999). This evaluation will require tests of feasibility from different perspectives and cultural contexts.

Multicultural identity is related to cognitive flexibility and a store of cultural knowledge. Openness to experience is related to the receptivity to gaining counter-normative knowledge from diverse sources. Cultural intelligence is related to the ability to interact effectively and sensitively with people from other cultures. It provides the ability to gain insights from people from different nations and utilise it strategically. These three constructs can be linked together with the creative cognition approach, and anxiety and uncertainty management theory. Together, they can contribute to innovative work behaviour.

Summary

- Anxiety and uncertainty management theory and creative cognition theory forms the theoretical framework linking the four constructs: multicultural identity, openness to experience personality trait, cultural intelligence and innovative work behaviour
- The study conceptualised the four constructs as important individual variables combined as a response to global trends. An increasing cognitively diverse workforce requires cultural sensitivity. A fast-paced digital and technological workforce requires innovation. A millennial workforce with evolving perspectives requires an open global-mindset.

Literature Review

Multicultural Identity

The world is changing rapidly. This research is a response to global trends. The workplace is becoming more culturally diverse. According to Chen and Starosta (1998), employees are expected to have cultural competence to work effectively with people from different backgrounds. It is no longer a skill reserved just for expatriates, but local employees as well. Globalisation means increased migration. New Zealand has a large number of migrants coming into the country. By 2021, ethnic people apart from Pacific people and Maori are expected to rise to 18% of the population (Singham, 2006). New Zealanders will be expected to not just interact with colleagues from other cultures, but their fellow neighbours who live beside them.

The importance of international trades to New Zealand is indicative of the evolving multicultural landscape of the nation. In this "new era of unprecedented global economic interactions" as quoted by Cant (2004), it is increasingly essential to be able to communicate with people from different countries, values, and ways of doing things. It is vital for the success in interpersonal relationships, work, and business ventures. With nations going into multilateral agreements for trade, it is also crucial for politicians to understand that people from different nations have different cultures, and perceive the world differently (Nittaya, 2016).

Global labour movements across borders forecast the rise of employees in the workplace with multicultural identities. According to Nguyen and Benet-Martinez (2010), there is a distinction between multiculturalism and multicultural identity. A multicultural person is exposed to more than one culture and may know different cultural systems. However, in contrast to multicultural identity, they may not have strong attachments and loyalties to the respective cultures, such that it incorporates into who they are as a person. Multiculturalism is a more general term referring to more than one culture; however, if an individual feels like they belong to more than one, they are considered as having a multicultural identity. It then follows that biculturalism is a more specific term referring

to exactly two cultures, so a person with a bicultural identity is said to feel an attachment to two cultures.

Multicultural ideology can be used to acknowledge the presence of distinct cultures of immigrant groups. However, it can also be used to recognise the existence of indigenous people in colonised nations (Nguyen & Benet-Martinez, 2010). Because of this reason, this study included the bicultural option in the cultural identity question. While Korzilius et al. (2017) merged the bicultural and multicultural groups in their research, this study retained the bicultural group in the questionnaire. The decision to maintain the bicultural category is mainly due to the fact of a strong Maori presence in Aotearoa New Zealand, who are the indigenous people here before the Europeans settled. Following New Zealand history, the bicultural option would closely align with the Maori-Pakeha relationship, before the other immigrant groups moved into New Zealand. Hence, this study believes in the importance of retaining this category.

Goclowska et al. (2018) posit that living in a culturally homogenous environment requires little adaptation. However, belonging to two or more cultures is more demanding. Bicultural experiences need individuals to suspend existing assumptions to integrate into their new sociocultural context. Being able to hold different perspectives mentally leads to them having a more flexible cognitive system and creative functioning. Being able to incorporate conflicting viewpoints help them to think more complexly.

Niebuhr (2010) asserts that the interaction between heterogenous skilled workers gave rise to knowledge spillovers and produced new research ideas. The diversity and cultural mixing may be the reason immigrants patent at much higher rates than natives. Creativity is also greater in regions marked by more diverse employment bases (Niebuhr, 2010).

Fitzsimmons et al. (2017) assert that global firms should acknowledge the talents multicultural employees bring to the table. Those who have more cultural identities are also more likely to have higher cultural intelligence and more social capital. These multicultural individual

are more sensitive to cultural cues. They are more likely to feel comfortable interacting with people from other cultures because of their upbringing. The foreign is familiar to them due to the multicultural experiences they have had integrated into their self-concept of who they are (Furusawa & Brewster, 2015). Also, those who have integrated their multiple identities report better personal well-being, as compared to those who compartmentalised them.

Cheng, Sanchez-burks and Lee (2008) investigated the relationship between identity integration and creative performance. They discovered that individuals who have integrated more of their identities performed better on creative tasks. The psychological management of multiple social identities relates to the accessibility of diverse knowledge domains. The ability to utilise many different knowledge domains readily at hand is vital for the creation of new ideas (Smith, Ward & Finke, 1995). Combining knowledge that appears to be unrelated on the surface is essential for creative performance (Rietzschel, Nijstad & Stroebe, 2007). Social identities refer to aspects of the individual which signify membership to specific cultural groups. Individuals may have multiple social identities, and when these identities are activated, the knowledge systems are made available for use (Fiske, 1998).

Aytug et al. (2018) elaborate by saying that people who have access to schemas and cognitive structures of multiple cultures have a multitude of alternatives which they can use for problem-solving and increasing creativity. Also, multicultural experiences prevent rigid thinking, expands the individual's toolbox of cultural schemas and boundaries, to be selected for use given a context (Leung et al., 2008). Cultural schemas represent an individual's cognitive system, is socially constructed and comprises of knowledge, beliefs, values and attitudes. There are also behavioural assumptions and norms in a given culture (Fiske & Taylor, 1984). Multiple exposures to multicultural experiences help individuals to become epistemically unfrozen and more sophisticated in their information processing (Tadmore et al., 2018). Also, they have greater intergroup tolerance because of the reduced need for cognitive closure. Kruglanski (1989) defined cognitive closure as "a desire for a firm answer to a question;

any firm answer as compared with confusion and uncertainty" (Kruglanski, 1989, p.13). Exposure to multiple cultures allows "experiential compression of time and space" (Giddens, 1985). This cultural mixing is the experience of both local and foreign cultures at the same time and space.

Chen et al., (2016) suggest that while some people may perceive culturally-mixed stimuli as threatening, open-minded individuals may interpret culture mixing as an opportunity to catalyse new integration of ideas and become more innovative. Multicultural experiences when internally processed in a meaningful way, have been discovered to predict greater creativity (Leung and Chiu, 2010).

Multicultural individuals possess greater integrative complexity because of their different identities and being able to engage in cultural frame switching (Hong, Brannen & Thomas, 2010). Tadmor et al. (2009, p.106) define integrative complexity as the degree to which people accept the reasonableness of clashing cultural perspectives on how to live. It is also the degree to which they are motivated to develop cognitive schemas that integrate these competing worldviews. People who lived or worked in bicultural or multicultural environments, show more resourcefulness and originality than monocultural people, because of the ability to move fluidly between diverse cultural schemas (Saad et al., 2013). Also, being able to feel connected to different cultures and having a strong familiarity with them, will lead to a more open and dynamic way of thinking. The sense of belonging to disparate cultural groups will result in the tangible benefits of creativity and innovative work behaviour.

Openness to Experience Personality trait

Openness to experience is the dispositional inclination towards new or different intellectual and cultural experiences (DeYoung, 2014), and covers a wide range of behavioural and attitudinal tendencies towards novelty, variety, and personal growth (Woo et al., 2014). Openness reflects a personal desire to seek, generate, and learn new ideas and knowledge, and to engage in artistic, philosophical, and scientific pursuits (DeYoung, 2014; Woo et al., 2014).

McCrae and Costa (1997) claim that open individuals have an absorptive ability to combine and integrate new and unrelated information. These characteristics allow open individuals to find novel solutions when exposed to unfamiliar situations. Also, it helps them to make better decisions. It may imply that individuals who have higher openness to experience scores may be more likely to exhibit innovative work behaviours. There may also be an interaction effect with cultural intelligence as a possible acquirable skill, which can capitalise on multicultural identity to produce innovative work behaviour. If an individual is monocultural, but score highly on openness to experience, he or she may also be more receptive to learning more about cultural intelligence and being innovative. It may lead to a multicultural identity if the individual expresses attachment to a variety of cultures.

Openness to experience personality trait is strongly related to the four facets of cultural intelligence, yet it is rarely studied (Oolders et al., 2008). Previous research has looked at conscientiousness and job performance. It is possible that in a homogenous group, a conscientious outlook may help in performance, where there are no additional variables like cultural differences. However, nowadays, workplaces with diverse demographics are the norm, inevitable, and are only expected to become more different. To alleviate the risk of conflicts due to differing perspectives, it may mean that personality traits like openness to experience, and intercultural skills are becoming more relevant and essential for the future of work. It is no longer just applicable for expatriates going on

overseas assignments, but locals who will be working with migrant colleagues.

Openness to experience personality trait is suggested to be an essential component here because, open individuals are more ready to accept differences between cultures, compared to individuals who are not open-minded (Bhagat & Prien, 1996). They are less likely to stereotype and be biased towards people of other races (Flyn, 2005). Chen et al. (2016) assert that openness to experience buffers perceived threat from other cultures. Openness to experience has been found to influence threat appraisal during performance tasks. Schneider et al. (2012) discovered in an arithmetic task that the openness trait predicted higher positive affect, lower negative affect and perceived threat. Perry and Sibley (2013) confirm this with the study that individuals with lower openness trait are more sensitive to information that signals threat and danger from outgroup members. They are more likely to adopt the cognitive strategy of managing anxiety and uncertainty. Individuals with low openness are more likely to be susceptible to stereotypical information due to their need for existential closure. Hence, they are more like to pay attention to threatening signals. Higher openness suggests greater cognitive flexibility and counter-normative ideas, which support creative functioning (Perry & Sibley, 2013).

Bernardo and Presbitero (2018) assert that the opposite of flexible cognitive thinking is cognitive rigidity, where the individual tends to persevere in applying the same set of cognitive and behavioural processes even if evolving circumstances require a different strategy. These individuals are unwilling to switch or explore other cognitive approaches to changing task demands. The overdependence on preexisting mental systems leads to a failure to adapt to environmental conditions.

Oolders et al. (2008) examined the effect of openness to experience on adaptive performance, with cultural intelligence as a mediator. They posit that an individual's level of openness is likely to predict adaptive performance. Adaptive performance has been defined as the proficiency with which people alter their behaviour to meet the demands of the environment, and event, or a new situation (Pulakos et al., 2000).

Also, open individuals are more likely to be culturally intelligent and will perform more effectively in transitional or novel environments (Oolders et al., 2008).

Woo, et al. (2014) investigated the personality trait openness to experiences, its lower level structure, its measurement scale, and its cross-cultural equivalence. Woo, et al., (2014) conceptualised openness to experience as a multifaceted, hierarchically organised construct representing ways in which an individual respond to novel stimuli. They propose six facets- intellectual efficiency, ingenuity, curiosity, aesthetics, tolerance, and depth. Also, there are two intermediate levels of "aspects"- Openness to intellect and Openness to culture. Intellectual efficiency, ingenuity, and curiosity are proposed to load on the openness to intellect aspect. Aesthetics, tolerance, and depth are intended to load on the openness to culture aspect (Woo et al., 2014).

Individuals who score high on the intellectual efficiency facet possess quick cognitive processes and are perceived by others as smart and wise. Individuals who score high on the ingenuity facet are known for using existing knowledge, ideas, products, combining them into something entirely new in a creative manner. Individuals who score high on the curiosity facet are perceived to be inquisitive and love learning about science and mechanics. They are likely to experiment with physics or chemistry concepts or tinker with electrical appliances. These three facets are on the intellect aspect of openness (Woo et al., 2014).

Individuals who score highly on the aesthetics facet appreciate various forms of art, such as paintings, classical music, buildings, and landscape. Individuals who score high on the tolerance aspect are comfortable interacting with people from other cultures, who speak a different language or possess alternative perspectives. They are interested in learning about different cultures and making friends with people around the world. Individuals scoring high on the depth aspect desire self-transformation, gaining insights into oneself and the world. They may enjoy philosophical discussions, meditate and attend personal growth seminars. These three facets are on the cultural aspect of openness (Woo et al., 2014).

An organisation that recognises the importance of diversity will attract and retain a diverse group of employees who can contribute valuable knowledge regarding consumer behaviour of different ethnic groups (Lambert, 2016). Oparaocha (2016) emphasised that strong intra-organisational relationships can lead to narrow-mindedness and inward-looking behaviour within the organisation. This behaviour that signal low openness to experience, may result in "not invented here syndrome" Opraroacha (2016) defines the "not invented here syndrome" as a mindset and type of organisational culture that is biased towards internally developed solutions as compared to being open to innovative ideas sourced from the external environment, which may be more effective. Circumventing this mindset requires the fostering of trust and enthusiasm within different units, to facilitate knowledge sharing. An individual with higher openness to experience is receptive to gaining and sharing new knowledge from other cultures (Perry & Sibley, 2013).

Cultural Intelligence

Are students ready for the Future of Work?"

Kim (2010, p.177) emphasised that "intercultural communications is arguably the most serious of all the problems confronting humankind." Nittaya (2016) discovered that students in a New Zealand university recognised the importance of intercultural communication in the workplace. However, their attitudes toward interaction with students from other cultures were not beneficial for nurturing intercultural communication skills. Nittaya (2016) asserts that these students must be able to initiate and maintain harmonious relationships with people from all around the world. They need to be able to see the benefits in learning about other cultures and acquire the sensitivity.

Nittaya (2016) discovered a gap in “theory" and "practice." Participants were not keen to initiate communication with people from other cultures. They were apathetic about making friends with international students (Brown & Daly, 2005). Nittaya's (2016) study was included in this literature review because the participants from my research were from the same university in New Zealand. Instead of management students, the participants were predominantly from the Social Sciences. Participants are recruited based on the assumption that these students will be forming the bulk of the workforce in the next few years.

This study asserts that cultural intelligence is vital for effective intercultural communication. Ang and Van Dyne (2008) defined cultural intelligence as an individual's capability to function effectively in situations characterised by cultural diversity. Cultural intelligence, overall, allows an individual to adapt to cross-cultural settings (Ang, Van Dyne, & Koh, 2006). Cultural intelligence as a construct is made up of four facets. They are metacognitive, cognitive, motivational and behavioural.

The metacognitive facet will enable individuals to interpret cultural knowledge, plan, and strategies for cultural situations. It has a reflective component (Ang et al., 2006). Cognitive facet refers to the individuals' knowledge of norms, practices, and values in different cultures. These can be derived from personal experience as well as education (Ang, et al., 2007,

p. 338). The cognitive and metacognitive facets are distinct in the sense that cognitive is like the raw material of explicit knowledge, whereas metacognitive processes apply knowledge into insights in a strategic way. The motivational facet refers to an individual's drive to put effort and adapt to various cultural settings (Earley & Ang, 2003). While the cognitive and metacognitive facets seem to indicate skill and intelligence, the motivational aspect suggests a personal attribute, an inner desire, and willingness to initiate contact with other cultures, learn from them and share with them. Instead of fear of a person from a different background, perceived to be a "stranger," a person with high motivational cultural intelligence will be less likely to feel anxiety but an intrinsic urge to interact with a person from a different culture. The behavioural aspect of cultural intelligence is an individuals' ability to display appropriate verbal and nonverbal actions when relating to people from different cultures (Ang et al., 2006, p. 101). While the metacognitive, cognitive, and motivational facets seem to refer to internal processes, it is possible to observe the behavioural aspect, where theory meets practice externally.

Bogilovic and Skerlavaj (2016) found that motivational and metacognitive facets of cultural intelligence reduced social categorisation process, and positively correlates with individual creativity. The social categorisation process refers to individuals who categorise themselves as belonging to a particular social group, and others to other specific categories. It creates a us-and-them phenomenon where certain stereotypes are attached to particular cultures. Crotty and Brett (2012) found that people who have higher metacognitive cultural intelligence are more likely to develop a fusion culture in their organisational environment, by integrating different cultural ideas into a shared common one.

Bogilovic et al. (2017) assert that individuals who are more culturally intelligent are less likely to hide their knowledge in a work context. Knowledge sharing leads to individual creativity. Crotty and Brett (2012) posit that metacognitive cultural intelligence helps individuals to perceive themselves as in-group members compared to outgroup members. Cognitive cultural intelligence help individuals with the knowledge about norms, practices, religion, language, economic systems of people from other

cultures. These individuals understand the similarities and differences amongst the culture they are from and those of whom they are interacting. They will overcome prejudices, and share their cultural understanding with others. Motivational cultural intelligence help individuals with the drive and desire to interact with those from other cultures, to learn and overcome potential obstacles. These individuals enjoy cross-cultural experiences and seek opportunities to communicate with those from other ethnic backgrounds. The motivation to have relationships with those who are different alleviates social categorisation and knowledge hiding processes. Behavioural cultural intelligence help individuals with the appropriate verbal and non-verbal behaviours when interacting with people from diverse cultures. Exhibiting culturally sensitive behaviour mean that they are more likely to be accepted by outgroup members.

Presbitero and Attar (2018) investigated intercultural communication effectiveness, cultural intelligence, and knowledge sharing. They discovered that anxiety and uncertainty are significantly and negatively related to knowledge sharing. Intercultural communication effectiveness mediated between the two concepts. Also, cultural intelligence moderates intercultural communication effectiveness. They posit that cultural intelligence as a skill and intelligence, allows individuals to execute complicated tasks and accomplish desired goals. Cultural intelligence will lessen the negative influence of uncertainty and anxiety on intercultural communication effectiveness, thereby contributing to knowledge sharing (Presbitero & Attar, 2018).

Gagne (2009) defines knowledge sharing as “the tendency to communicate and relay information, ideas, and knowledge to other people” (Gagne, 2009). It is fundamentally a relational act where a person is communicating the understanding, and the other person is receiving. This sharing of knowledge is vital for a firm's innovative processes. Cultural intelligence would provide individuals with the necessary cultural knowledge (Ang et al., 2007) and cultural metacognition (Thomas et al., 2015).

The cultural competence will reduce the uncertainty and anxiety on intercultural communication effectiveness. It will provide individuals working in a global environment with cognitive, behavioural and verbal flexibility (Thomas et al., 2015). They are less likely to possess ethnocentric attitudes with cognitive rigidity which may impede knowledge sharing.

Presbitero and Attar (2018) assert that cultural intelligence is an essential ability for people working in cross-cultural environments. It should be nurtured and further developed. People can acquire cultural intelligence through experiential learning processes, which include cultural experiences, engaging in reflective observation and active experimentation (Kolb, 1984).

Oolders, Chernyshenko, and Stark (2008) found that cultural intelligence is a mediator of relationships between openness to experience and adaptive performance. Pulakos et al. (2000) define adaptive performance as the proficiency with which people alter their behaviour to meet the demands of the environment, an event, or a new situation. Sahin and Gurbuz (2014) have a similar finding, which they posit cultural intelligence as a critical indicator of adaptive performance. Individuals who are more culturally intelligent are successful in responding to global trends and challenges.

Shaffer and Miller (2008) noted that cultural intelligence is a crucial success factor for expatriates going overseas on international assignments. This study proposed that this skill is also useful for locals interacting with migrant colleagues. Lorenz et al. (2018) found that expatriates with high cultural intelligence are more likely to recognise opportunities in an international context and use it to their advantage.

Korzilius, Bucker and Beerlage (2017) reported that cultural intelligence fully mediates the effect of multiculturalism on innovative work behaviour. Cultural intelligence will help employees capitalise on multicultural diversity in the workplace, to become more innovative. Expatriates need cultural intelligence to be able to integrate the knowledge that they receive from colleagues from different cultures into their innovative practice. As Korzillius and associates (2017) assert, cultural intelligence is vital for reconciling different cognitive perspectives.

This study posits that cultural intelligence and emotional intelligence, while partially interrelated are two distinct concepts. Emotional intelligence is culture-specific. Every culture creates its own meaning to specific emotions. Earley and Ang (2003) posit that emotions are significantly symbolic and historic within the culture. Being able to interpret emotional signals in one culture may not transfer to another culture. Ang et al. (2007) assert that people with high emotional intelligence in one culture may not be as emotionally intelligent in another. Emotional behaviours vary among cultures and explain the difference.

In contrast, people with high cultural intelligence may recognise non-verbal behaviours in people from diverse cultures, and respond in a sensitive, appropriate way. Darvishmotevali (2018) found that cultural intelligence strengthens the effect of emotional intelligence on creative performance amongst frontline employees. Also, environment uncertainty mediates between emotional intelligence and creative performance. Leung and Chiu (2010) found that emotional regulation, part of the mechanism of cultural intelligence, helps people to manage uncertainty and anxiety triggered by blending multiple cultures. The emotional regulating effect of cultural intelligence links to anxiety and uncertainty management theory that is relevant to cross-cultural encounters.

Oparaoacha (2016) recommends eliminating organisational silos, exploring psychological biases, and nurturing a supportive organisational culture. The management of these factors will help in knowledge flow and innovativeness. Knowledge sharing predicts the relationship between diversity and creativity (Bodla et al., 2018). There is a causal relationship between knowledge sharing and innovative work behaviour (Ahmed et al. , 2018). Also, cultural intelligence enhances cross-cultural team knowledge sharing and performance (Solomon & Steyn, 2017). O'Byrne (2018) supports this by proposing that human resource professionals should actively screen for cultural intelligence when selecting expatriates for assignment. They should provide training programmes that nurture cultural intelligence to ensure expatriates' success.

This study further asserts that this recommendation would benefit local employees who need to collaborate with their diverse colleagues, as well as communicate with trade suppliers or importers from overseas. This cross-cultural communication no longer applies to employees who are going overseas because of social media, which mean that the world is becoming smaller and closer. Employees will have to interact with clients or suppliers from overseas online. Presbitero (2016) emphasised that previous research looked at cultural intelligence in a face-to-face setting. However, few have evaluated cultural intelligence in virtual cross-cultural contexts. Presbitero (2016) found that cultural intelligence positively predicts task performance among call centre employees and other working professionals who interact virtually with customers from culturally diverse backgrounds.

Multilateralism necessitates world leaders from different nations and cultural values to collaborate for the wellbeing of their citizens. Trade negotiations require an understanding of possibly conflicting cultural systems, culturally-sensitive communication, and trust. Culturally intelligence is a vital skill for the future politician, expatriates, local employee and student to work collaboratively with people from diverse backgrounds. Cultural intelligence leads to international leadership potential, effectiveness, and styles (Solomon & Steyn, 2017). Cultural intelligence is vital for the Future of Work.

Innovative Work Behaviour

The world is not just becoming more culturally diverse; it is also moving at a faster pace. Korzilius, Bucker & Beerlage (2017) discovered that cultural intelligence mediated between an individual's multicultural identity and innovative work behaviour. Innovative work behaviour is an essential component of organisational competence. An employee's innovative work behaviour is said to be directly related to an organisation's creative output. Furthermore, in this modern society, organisations need to be productive to gain a competitive edge and survive globally. Hence, an employee who displays innovative work behaviour is an essential asset for a company to remain adaptable to external forces.

Farr and Ford (1990) define an individual's innovative work behaviour as behaviour that aims to achieve the initiation and intentional introduction (within a work role, group or organisation) of new and useful ideas, processes, products and procedures. It is the actions of individuals to produce and implement novel solutions intended to positively transform the individual, group or organisation (Bos-Nehles, Renkema, & Jannssen, 2017). The ability to continuously innovate products, services and work processes is crucial for organisations (De Jong & Den Hartog, 2010). Individuals' actions are of crucial importance for continuous innovation and improvement.

The employee who scores high on innovative work behaviour will be able to come up with new insights, challenge the status quo, share their vision with colleagues, and then implement them into work (Yuan & Woodman, 2010. New technology such as artificial intelligence means that current and future employees have to embrace change, keep learning, and adopt new ways of doing things. Korzilius, Bucker & Beerlage (2017) posited that diversity contributes to innovative work behaviour. It helps people to become less rigid, find new perspectives on solving problems and become creative.

Innovation is "a subset of organisational change in which new products, technologies, or structures are introduced" to improve organisational effectiveness (Korzilius et al., 2017). Researchers usually

focus on the firm level; however, this study focused on the individual employee level. Innovative work behaviour drives the organisations' orientation to learn with innovative abilities as the goal (Siguaw, Simpson, & Enz, 2006). The benefits of innovative work behaviour are far-reaching. Research shows that employees that are more innovative at work report higher job performance, job satisfaction, positive relationships, less stress and greater personal growth (West & Anderson, 1996). Innovation at work has a valuable contribution to the long-term survival and effectiveness of the companies(Amabile et al., 2005). Overall, it is essential for policymakers in organisations to nurture a psychologically safe environment that fosters innovative behaviours in the employees.

Nehles et al. (2017) cautioned that allowing employees to rate their innovative work behaviour can lead to socially desirable answers. This study included the Marlowe-Crowne social desirability scale to screen for more robust data. Also, innovative work behaviour, in this case, is measured as a one-dimensional construct (De Jong & Den Hartog, 2010; Bonesso & Tintorri, 2014). The measure was adapted for self-report because the participants are not currently working for a specific organisation and will not be able to have supervisors to vouch for them. This study aims to predict their future behaviour as well; hence, participants respond to what they are likely to do in their current or future job. This study has focused mainly on the internal personality, disposition, cognitions and attitudes of the future employee.

This study posits that cultural intelligence predicts innovative work behaviour. Cultural intelligence will lessen the negative influence of uncertainty and anxiety on intercultural communication effectiveness, thereby contributing to knowledge sharing (Presbitero & Attar, 2018). Gagne (2009) defines knowledge sharing as “the tendency to communicate and relay information, ideas, and knowledge to other people” (Gagne, 2009). It is fundamentally a relational act where a person is communicating the understanding, and the other person is receiving. This sharing of knowledge critically predicts a firm's innovative processes.

This study focused on individual attributes and innovative work behaviour. However, it sought to draw inspiration from research literature at a firm level. Golgeci et al. (2017) define absorptive capacity as organisational processes that seek to acquire knowledge, transform and exploit it to boost its performance and competitive advantage. Absorbative capacity comprises of two dimensions: potential absorptive capacity and realised absorptive capacity. Potential absorptive capacity can identify, resource and compile essential knowledge from external sources. It evaluates the knowledge and gives it value. Realised absorptive capacity creates mechanisms to process, develop and transform knowledge by integrating it with existing understanding. The organisation utilises the acquired knowledge, existing knowledge and transformed knowledge to become more innovative and responsive to global changes. Golgeci et al. (2017) found that cultural intelligence mediates between potential absorptive capacity and realised absorptive capacity. Cultural intelligence is a solution to the challenge of cultural differences that obstruct knowledge exploration and transfer (Fabrizi, Guarini, and Meliciani, 2016). This study discovered that the innovative processes at an organisation-firm level are similar to what happens on an individual level.

There is the possibility of a two-stage innovative work behaviour model, with the first stage being a creative internal idea-generating process, and the second stage being an innovative external idea-implementing process (Dorenbosch et al., 2005). These two dimensions appear to parallel the concepts of potential absorptive capacity and realised absorptive capacity. This parallel suggest that managers training cultural intelligence in their employees can effect change at an individual and firm level, through the facilitation of knowledge resources.

Oparaocha (2016) emphasised that strong intra-organisational relationships can lead to narrow-mindedness and inward-looking behaviour within the organisation. Opraroacha (2016) defines the “not invented here syndrome” as a mindset and type of organisational culture that is biased towards internally developed solutions as compared to being open to innovative ideas sourced from the external environment, which may be more effective. Circumventing this mindset requires the fostering of trust

and enthusiasm within different units, to facilitate knowledge sharing. Knowledge sharing predicts the relationship between diversity and creativity (Bodla et al., 2018). There is a causal relationship between knowledge sharing and innovative work behaviour (Ahmed et al., 2018). Also, cultural intelligence enhances cross-cultural team knowledge sharing and performance (Solomon & Steyn, 2017). The facilitation of knowledge from diverse sources contributes to innovative work behaviour.

This study posits that innovative work behaviour, aided by a multicultural identity, openness to experience personality trait, and cultural intelligence, is essential for the Future of Work.

Social Desirability Responding

This study has introduced the constructs multicultural identity, openness to experience personality trait, cultural intelligence and innovative work behaviour. This study argues that these constructs are necessary for the Future of Work, to be able to adapt to the evolving global economy. Social desirability bias can affect relationships when measuring these constructs. King and Bruner (2000) highlight that social desirability bias has a crucial part to play in obscuring relationships among variables and producing artificial relationships among independent and dependent variables.

People who score high on social desirability tend to present themselves favourably by not providing an honest response. The bias becomes a more significant problem with controversial or sensitive issues like race attitudes (Sarbescu et al., 2012).

Paulhus (2002) states that "socially desirable responding" is typically defined as the tendency to give positive self-descriptions. Therefore, it is essential to control social desirability bias in self-report assessments (Ranjan & George, 2014). This study has included the Marlowe-Crowne short form C to circumvent this. This study supports the likely use of this form to aid in future hiring decisions.

Smeding, Dompnier, and Darnon (2017) investigated the individual differences in perceived social desirability of openness to experience. They emphasise that social desirability responding is a common confounding factor, present in self-report measures in personality research.

Paunonen & LeBel (2012) conceptualised social desirability responding as being normally distributed in a given population (Paunonen & LeBel, 2012). Openness personality and cultural issues can be sensitive to some people who have internal attitudes that they would like to keep to themselves. Hence, it is natural for them to want to portray themselves in a positive light, through a socially desirable responding style. The openness trait is a theoretically relevant dimension because of its relation to overclaiming and self-representation (Smeding et al., 2017).

College students are particularly likely to present themselves as intellectual and knowledgeable when they answer to a personality test in a university context (Smeding et al., 2017).

As recommended by Smeding and colleagues, our study advised participants that their responses are anonymous, as they did it online. There is also the instruction for them to answer honestly to selecting the statements that best apply to them. Individual's reports of undesirable characteristics are higher in anonymity conditions than in visibility conditions (Paulhus, 1984). Social desirability has a moderating role in improving test-retest reliability.

This study posits that social desirability responding is a necessary construct to consider when measuring self-report data that pertain to personality and culture.

Summary

- Multicultural individuals possess greater integrative complexity because of their different identities and being able to engage in cultural frame switching (Hong, Brannen & Thomas, 2010).
- Openness reflects a personal desire to seek, generate, and learn new ideas and knowledge, and to engage in artistic, philosophical, and scientific pursuits (DeYoung, 2014; Woo et al., 2014). McCrae and Costa (1997) claim that open individuals have an absorptive ability to combine and integrate new and unrelated information.
- Cultural intelligence will help employees capitalise on multicultural diversity in the workplace, to become more innovative (Korzillius et al., 2017).
- Farr and Ford (1990) define an individual's innovative work behaviour as behaviour that aims to achieve the initiation and intentional introduction (within a work role, group or organisation) of new and useful ideas, processes, products and procedures.
- Cultural intelligence enhances cross-cultural team knowledge sharing and performance (Solomon & Steyn, 2017). The facilitation of knowledge from diverse sources contributes to innovative work behaviour.
- King and Bruner (2000) highlight that social desirability bias has a crucial part to play in obscuring relationships among variables and producing artificial relationships among independent and dependent variables.

Research Questions

The research questions this study endeavours to answer are:

Research question 1.

Does socially desirable responding influence openness to experience, cultural intelligence, and innovative work behaviour scores?

Research question 2.

Which cultural identities (monocultural, bicultural, or multicultural) are likely to possess a more open personality?

Research question 3.

Which cultural identities (monocultural, bicultural, or multicultural) are likely to be better at interacting with people from other cultures?

Research question 4.

Which cultural identities (monocultural, bicultural, or multicultural) are likely to be more innovative at work?

Research question 5.

How does openness to experience and cultural intelligence interact to contribute to innovative work behaviour?

Research question 6.

What are the salient properties (sub-facets) in individuals' openness to experience personality trait and cultural intelligence should we investigate that influences innovative work behaviour?

Hypotheses

The previous section states six research questions. This section formulates the research hypothesis and aims to test them.

This study investigates the influence of socially desirable responding on openness to experience, cultural intelligence, and innovative work behaviour.

Hypothesis 1: Social desirability responding is positively related to openness to experience, cultural intelligence, and innovative work behaviour.

This study looks at the mean differences in population groups (Monocultural, bicultural, and multicultural).

Hypothesis 2A: Openness to experience scores are significantly different in the monocultural, bicultural and multicultural populations.

Hypothesis 2B: Cultural intelligence scores are significantly different in the monocultural, bicultural and multicultural populations.

Hypothesis 2C: Innovative work behaviour scores are significantly different in the monocultural, bicultural and multicultural populations.

This study looks at the relationships of higher-order constructs.

Hypothesis 3A: Openness to experience scores are positively related to cultural intelligence.

Hypothesis 3B: Openness to experience scores are positively related to innovative work behaviour.

Hypothesis 3C: Cultural intelligence scores are positively related to innovative work behaviour.

Hypothesis 3D: Cultural intelligence mediates between openness to experience and innovative work behaviour.

Hypothesis 4A: Multicultural identity is positively related to cultural intelligence.

Hypothesis 4B: Multicultural identity is positively related to innovative work behaviour.

Hypothesis 4C: Cultural intelligence mediates between multicultural identity and innovative work behaviour.

This study looks at the relationships of lower-order constructs

Hypothesis 5A: Openness to experience sub-facets (intellectual efficiency, ingenuity, curiosity, tolerance, aesthetics and depth) are positively related to overall innovative work behaviour.

Hypothesis 5B: Cultural intelligence sub-facets (metacognitive, cognitive, motivational and behavioural) are positively related to overall innovative work behaviour.

Chapter Two: Method

Reducing Common Method Bias and Social Desirability Bias

This study alleviates common method bias, by recruiting students through various channels like the Psychology course preparation system, social media, and posters around the university campus. Also, this study uses different ranges for the Likert-scales in the questionnaire. This study analyses social desirability responding bias through the Marlowe-Crowne scale.

Recruiting Participants Procedure

The Psychology course preparation system allows Psychology students to experience being a participant in Psychology research. As part of their course requirement, they are encouraged to participate in any of the available psychological studies of their interest. They are awarded credits for their participation. The research study is shared through social media like Facebook, on relevant university clubs and departments. Emails are also sent out to these departments. The research poster is put up around the university campus. On the poster is a QR code, which links to the 103-question research survey.

Data Collection Software: SurveyMonkey

The survey software used for this research is SurveyMonkey. This study decided upon SurveyMonkey for its user-friendly interface, especially on a mobile device. Features provided includes IP checks of participants, which prevent duplicate responding.

Collection Channels: Posters, Social media, Psychology Course Prep

There is a total of 429 participants who registered. 1.17% were from posters around the university. 23.31% were from social media and email recruitment. The majority 75.52% were from the Psychology course prep system.

Removing data that have missing fields on any scales

The questionnaire consists of four validated scales. Some participants fail to complete all four scales. The reasons could be fatigue or a lack of interest because the questionnaire is lengthy. It could also be technical faults where participants are interrupted halfway through the survey. There is the possibility of processing the results with missing data fields. However, to increase the robustness and validity of the sample, any participants with missing values are deleted from the analysis. Only 409 participants remain after filtering for missing values.

Social Desirability Filtering

The Marlowe Crowne Social Desirability scale is used to filter out participants with overly positive responding styles. This study counts the social desirability score by tabulating only positive responses. They are added up to give the total score.

Removing data that exceeds 95th percentile social desirability.

The analysis looks at the normal distribution curve, where it removes respondents that score above the 95th percentile from further analysis. The 95th percentile score is 11. Hence, filtering deletes any participants that score >11. After filtering for social desirability, there are 398 participants with the desired data quality. Before filtering, a correlational analysis showed that social desirability correlated with openness to experience at .17, cultural intelligence at .14, and innovative work behaviour at .17. These are small to medium effect sizes. The results were significant at the 0.01 level. The significant correlations show that social desirability does influence other factors. Hence, this further justifies the utilisation of the Marlowe-Crowne scale in this research.

Participant Demographics

After filtering for social desirability, there are a total of 398 participants.

Gender.

The descriptive analysis showed that 20.1% or the population sample were males, and 78.9% were females. 1.0% responded under others, where they reported gender fluid, non-binary and Takatāpui.

Ethnicity.

56.8 % were European.19.3% were Maori. 5.0% were Pacific Peoples. 7.3% were Asian. 2.3% were Middle Eastern/Latin American/African, and 9.3% were others.

Age groups.

0.8% were under 17 years. The majority 83.4% were from the 18-30 years age range. 10.8% were from the 31-45 years age range. 5.0% were from the 46-60 years age range. This study adapted the demographic categories from the Statistics New Zealand census questionnaire (Statistics New Zealand, 2013).

Work/study.

The last demographic questionnaire was regarding the respondents' occupation- Working and studying. The definition of full-time work in New Zealand according to Immigration NZ is more than 30 hours (Immigration New Zealand, 2012). 4% were working full time. 34.2% were working part-time.

85.7% were doing their bachelors. 4.5% were doing a postgraduate certificate or diploma. 3.3% were doing their masters. 2% were doing their doctoral studies. Most participants are doing their undergraduate studies. While they may not be in full-time work, a significant number of participants work part-time.

Cultural identities.

Their cultural identities are as follows. 45.2% report being monocultural, 29.4% report being bicultural and 25.4% report being multicultural.

The Four Constructs Assessed

This study assessed participants on their cultural identity, openness to experience, cultural intelligence and innovative work behaviour scores. This research asserts that these four factors are relevant attributes to consider in the current and future employee, as a response to global trends.

Statistical Analysis

This study will use a range of statistical methods to test the research hypothesis.

Factor analysis.

Factor analysis will be used to assess the construct validity of the measurement scales. Openness to experience scale should have six sub-facets, cultural intelligence scale should have four sub-facets, and innovative work behaviour should have one.

Anova analysis.

ANOVA analysis will be used to compare the difference in means scores for the three cultural identity groups (monocultural, bicultural and multicultural).

Correlational analysis.

As a general population, this study will examine five constructs (Social desirability responding, multicultural identity, openness to experience, cultural intelligence, and innovative work behaviour) using correlational analysis. The preliminary analysis includes the social desirability responding to assess its influence. The subsequent correlational analysis will examine the constructs again after removing data with high positive responding. The broad factors are first analysed, followed by the sub-facets.

Regression analysis.

There are six reported sub-facets for openness to experience. They are intellectual efficiency, ingenuity, curiosity, aesthetics, tolerance, and depth. The first three sub-facets categorises under the intellect aspect, and the last three sub-facets categorises under the culture aspect. There are four reported sub-facets for CQ. They are metacognitive, cognitive, motivation, and

behaviour. Regression analysis looks at these sub-facets as single predictors to innovative work behaviour.

Statistical Software: IBM Statistics Package Version 25

This study will use IBM Statistics Package Version 25 for all data analysis. PROCESS version 3.1 macro by Hayes will also be used to examine mediating relationships between OE, CQ, and IWB. Before the main analysis starts, factor analysis and reliability analysis of the scales will be done to check that the measures are consistent in this research context.

Selection of Statistical Methods

The purpose of this chapter is to explain the rationale behind the selection of statistical methods. The design of this study is cross-sectional. This study measures cultural identity, openness to experience personality trait, cultural intelligence, innovative work behaviour, and social desirability at the same point of time. This study explored the relationships between these naturally occurring constructs and the strengths of their associations. The correlational analysis would be able to examine how the themes mentioned above interrelate. The descriptive analysis shows that the data distributes normally and variances are similar. The scales measuring the constructs appear to be quite reliable.

Factor analysis shows that the measurement scales have valid constructs and are made up of the hypothesised latent variables or sub-facets. Simple regression analysis shows that a single predictor contributes to an outcome in a linear model.

Multicultural identity predicts cultural intelligence. Multicultural identity predicts innovative work behaviour. Openness to experience predicts cultural intelligence. Openness to experience predicts innovative work behaviour. Cultural intelligence predicts innovative work behaviour. Simple regression analysis allows this research to examine the strength of the overall constructs towards the outcome. The outcomes of interest in this study are mainly innovative work behaviour, followed by cultural intelligence.

Multiple regression analysis incorporates more than two predictors in the linear model towards the outcome. The purpose of this is to examine the interactions amongst the constructs which collectively predict the outcome variable. Cultural identity, openness to experience personality trait and cultural intelligence, are three predictors forced into the regression model, as contributing to innovative work behaviour. Each predictor accounts for incremental variance in innovative work behaviour. The three variables are not closely linearly related. This study asserts that the three

constructs represent three different dimensions of an individual's cognitive resources, skills, and attributes.

Multicultural identity is a sociocultural concept that refers to an individual's definition of self and being. An individual with multicultural identity is more likely to feel an emotional attachment towards multiple cultures blended into the person's psyche. From nature versus nurture perspective, one can conceptualise the multicultural identity as dependent on one's upbringing, cultural experiences and external circumstances. The individual undergoes a meaning-making process to integrate these experiences into one's life. This process takes time.

The openness to experience personality trait implies a more stable disposition, that is unlikely to change much across the life span. It may have a biological aspect; for example, one can be born as more open-minded naturally. However, there may also be an interaction effect on life circumstances. Monocultural individuals, who have lived in homogenous environments, may benefit from cross-cultural experiences if the opportunities arise, provided they have an openness to experience personality trait.

Cultural intelligence, conceptualised as a form of intelligence, knowledge, and skill, is a form of competence to be able to interact sensitively with people from other ethnic backgrounds and effectively adjust to cross-cultural contexts. Cultural intelligence contrasts with multicultural identity and openness to experience, in the sense that training, cross-cultural experiences can help individuals to acquire and develop it. The multicultural identity may provide cognitive flexibility and knowledge. The openness to experience personality trait may facilitate the process of gaining more knowledge from different external sources. Cultural intelligence appears to be the active agent in catalysing these psychological resources to perform in a culturally diverse workplace.

Innovative work behaviour, as the outcome variable, is the desired behaviour employees exhibit in current and future organisations. Employees constantly generating and implementing new ideas are vital for thriving in a fast-paced, digital and technological workforce, that is continually evolving.

Mediation analysis observes when a third variable explains the relationship between a predictor variable and an outcome variable. The effect of the predictor on the outcome reduces when the equation includes the third variable. Multicultural identity positively increases innovative work behaviour through the help of cultural intelligence. Similarly, openness to experience personality trait positively increases innovative work behaviour through the help of cultural intelligence. This study posits cultural intelligence as the mediator for both interactions.

Measures

Cultural Identity: Monocultural, Bicultural, and Multicultural

Two previous studies have informed this single-item measure. Nuguyen and Benet-Martinez (2010) and Korzilius et al. (2017). “How would you label yourself in terms of your cultural background?” There are three response categories- Monocultural, Bicultural, and Multicultural.

This research utilised the single-item measure because an individual’s identity can be a subjective concept, which requires an immediate natural response, without over-thinking. The use of this single-item measure contrasts with other objective measures like the number of multicultural experiences or years studying abroad. The multicultural experiences may not lead to a multicultural identity unless blended into one’s psychological being. Nguyen and Benet- Martinez (2010) explained the multicultural identity as a sense of belonging and affiliation toward different cultures. A multicultural person can be exposed to multiple cultures, have the knowledge repertoire, skills, and still not have strong emotional attachments. A person, who has a multicultural identity, have different cultural identities integrated into who they are as an individual. This naturalised identity is something that can be shared readily, spontaneously, and collected through the single-item- “How would you label yourself in terms of your cultural background?”.

Openness to Experience

This study uses 54 item-measure from Woo et al. (2014). There are proposed to be a broad factor and two aspect level- openness to intellect and openness to culture. There is a total of 6 sub-facets. Intellectual efficiency, ingenuity, and curiosity load on the first aspect of intellect. Aesthetics, tolerance and depth load on the second aspect of openness to culture. Reliability analysis shows: Aesthetics (.88), Depth (.66), Tolerance (.80), Intellectual efficiency (.86), Ingenuity (.86), Curiosity (.68), and Broad factor openness (.90). Example items include: “Tasks that require a lot of thinking confuse me easily.” The construct is measured using a 5-point Likert-scale with responses: “Strongly disagree; Disagree; Neutral; Agree;

Strongly Agree" This study assigns each response with a range of negative to positive values. The scores per item are summed up and averaged to get the mean.

This research utilised this openness to experience scale because it is a derivative of the 120-item scale used in Oolders, Chernyshenko, and Stark (2008) study. Oolders et al. (2008) investigated cultural intelligence as a mediator of relationships between openness to experience and adaptive performance, which overlaps conceptually with this research. This research aims to reduce participant fatigue by using a shorter-scale. The other scale tested on the United States and New Zealand samples. This current 54-item scale tested on the United States and Chinese samples. The cross-cultural validity and concise nature of the 54-item scale give the basis for the selection of this measure.

Cultural Intelligence

This study uses the 20-item cultural intelligence scale (CQS) by Ang et al. (2006). It consists of four sub-scales: Metacognitive CQ, Cognitive CQ, Motivational CQ, and Behavioural CQ. Reliability analysis shows: Metacognitive (.79), Cognitive (.83), Motivational (.81), Behavioural (.82), and Cultural intelligence overall (.87). Example items include: "I am conscious of the cultural knowledge that I use when interacting with people with different cultural backgrounds." The construct is measured using a 7-point Likert-scale with responses: "Strongly Disagree; Disagree; Slightly Disagree; Neutral; Slightly Agree; Agree; Strongly Agree" This study assigns each response with a range of negative to positive values. The scores per item are summed up and averaged to get the mean.

This research utilised the cultural intelligence scale because it has been endorsed by Matsumoto and Hwang (2013) as the ideal measurement tool for investigating cultural constructs. The cultural intelligence scale provided incremental validity beyond demographic factors such as gender, age, language, and personality (Matsumoto & Hwang, 2013). The cultural intelligence scale retains nomological and predictive validity (Korzilius et al., 2017). Cultural intelligence enhances knowledge sharing, predicts cross-cultural effectiveness, expatriate performance, creativity, international

leadership potential, and styles (Solomon & Steyn, 2017). The validity, recognition, and ultilisation by other empirical research of this 20-item scale give the basis for its selection.

Innovative Work Behaviour

This study uses the 10-item instrument by De Jong and Den Hartog (2010) to measure IWB. Reliability analysis shows Cronbach alpha = .89. Example items include: "I search out new working methods, techniques or instruments." The construct is measured using a 5-point Likert-scale with responses: "Never; Rarely; Sometimes; Most of the Time; Always" This study assigns each response with a range of negative to positive values. The scores per item are summed up and then averaged to get the mean.

This research utilised the innovative work behaviour scale because it considers the possible multi-dimensional nature of innovative work behaviour. Most scales measure innovative work behaviour as a unidimensional construct. De Jong & Den Hartog (2010) reported that there is distinctiveness of four dimensions in the 10-item scale. However, they are weak and suggests innovative work behaviour as one-dimensional. Informed by Korzilius et al. (2017), who also used this scale, this study will investigate innovative work behaviour mainly as a single overall construct. Factor analysis may prompt further exploration into the underlying dimensions of the scale. These findings will be supplementary. The 10-item scale has good reliability and criterion validity. Participative leadership, external work contacts, and employees' innovation output positively correlate with the 10-item scale (De Jong & Den Hartog, 2010). Innovative work behaviour can benefit an organisation's innovative capacity and performance. The reliability, validity, and dimensional-nature of this 10-item scale give the basis for its selection.

Social Desirability (Marlowe-Crowne)

This study uses the 13-item scale- MCSDS-Short Form C. Previous research proved it to be the most reliable with an internal consistency of 0.76, test-retest reliability of 0.74, and it correlates at 0.93 with the full scale (Ranjan & George, 2014). This study shows its reliability to be 0.70, which is acceptable. Example items include: "It is sometimes hard for me to go on

with my work if I am not encouraged." The construct is measured using "True" or "False" responses. Responses that signal positive social desirability is assigned a value of 2. The other response is assigned the value of 1. Only items with positive responding are counted and totalled. This research will analyse the normal distribution of social desirability scores. Participant scores that exceed the 95^{th} percentile will be removed to increase the validity of the sample.

This research utilised the Marlowe-Crowne scale because it is one of the most popular scales with excellent reliability. While the current gold standard is the Balanced Inventory of Desirable Responding (BIDR), Lambert (2016) found that the Marlow-Crowne outperforms the BIDR in effectively identifying faking. The reliability and performance of the 13-item scale give the basis for its selection.

Chapter Three: Results

Descriptive Analysis

Table 1.

Descriptive data

	Openness to Experience	Cultural Intelligence	Innovative Work Behaviour
N	398	398	398
Mean	3.61	4.77	3.36
Std. Error Mean	.02	.03	.03
Std. Dev.	.39	.67	.60
Skewness	-.05	-.10	-.02
Std. Error Skew.	.12	.12	.12
Kurtosis	-.02	-.05	.51
Std. Error Kurt.	.24	.24	.24
Range	2.32	3.60	3.70
Minimum	2.49	2.80	1.30
Maximum	4.81	6.40	5.00

The social desirability scale, openness to experience scale, cultural intelligence scale, and innovative work behaviour scales show scores that distribute on the graph normally during preliminary analysis. Skew and kurtosis were minimal, and data do not violate Levene's test. (Refer to Table 1 and Appendix A: Descriptive histograms.)

Multiculturalism.

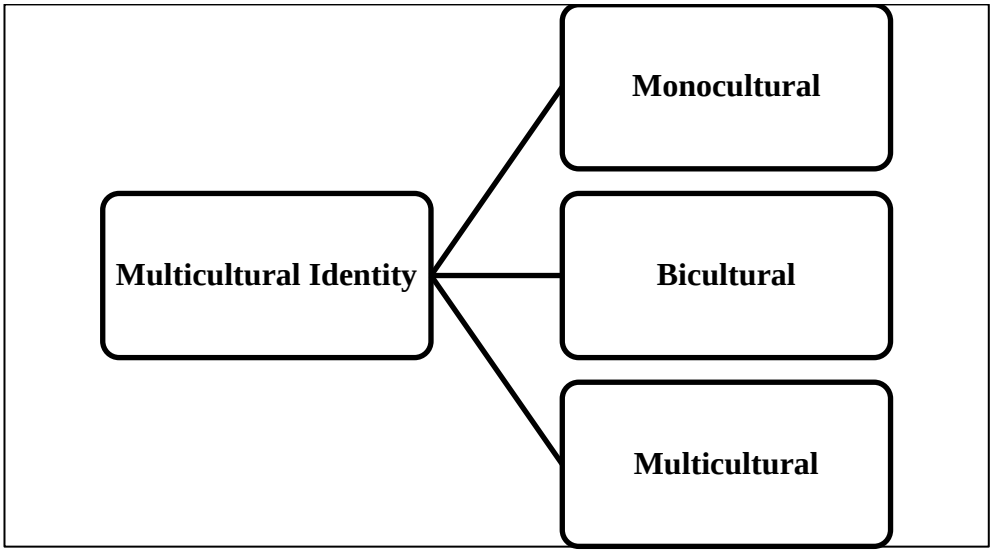

Figure 2. The three categories of cultural identity

Preliminary analysis of respondents' cultural identities is as follows. 45.2% report being monocultural, 29.4% report being bicultural and 25.4% report being multicultural. This study used the single item: "How would you label yourself in terms of your cultural background?"

Social Desirability Analysis

Table 2.

Preliminary correlation analysis of social desirability, openness to experience, cultural intelligence and innovative work behaviour before SDR filtering

Preliminary Correlational Analysis of Social Desirability, Openness to Experience, Cultural Intelligence and Innovative Work Behaviour (n = 409)				
	Social Desirability	Openness to Experience	Cultural Intelligence	Innovative Work Behaviour
Social Desirability	1	**.17****	**.14****	**.17****
Openness to Experience		1	**.43****	**.41****
Cultural Intelligence			1	**.30****
Innovative Work Behaviour				1

Note: **Correlation is significant at the 0.01 level (2-tailed).

Marlowe Crown Short Form C.

The correlational analysis aimed to investigate the influence of social desirability on other scores. (Refer to Table 2 to compare data.)

Reliability analysis.

The Marlowe Crown Short Form C consisted of 13 items. Reliability analysis showed Cronbach's $\alpha = .70$. The social desirability scale has good reliability.

A significant correlation between social desirability and openness to experience.

Social desirability and openness to experience were significantly correlated, $r = .17$, $p = .001$.

A significant correlation between social desirability and cultural intelligence.

Social desirability and cultural intelligence were significantly correlated,

$r = .14$, $p = .005$.

A significant correlation between social desirability and innovative work behaviour.

Social desirability and innovative work behaviour were significantly correlated $r = .17$, $p = .001$.

The influence of social desirability bias on the three constructs.

Social desirability has a significant small to medium effect on the scores of the three constructs- openness to experience, cultural intelligence, and innovative work behaviour. The significant correlations justify the filtering of socially desirable responding to increase the robustness and validity of data. ***Hypothesis 1 is supported here.***

The process for social desirability response filtering.

Positive responding was assigned the value of 2. Non-positive responding was assigned the value of 1. Only positive responding is summed up for each participant. Analysis of social desirability scores shows a normal distribution. The 95^{th} percentile score is 11. This study deleted participants that score >11.

Factor Analysis

Openness to experience.

This study used exploratory factor analysis on the 54 items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .87, which is “meritorious” according to Hutcheson and Sofroniou (1999). Bartlett’s test of sphericity is significant. Principal axis factoring presented 13 factors, with eigenvalues over Kaiser’s criteria of 1, which in combination explained 61.23% of the variance. This finding contrasts with the six factors proposed by Woo et al., 2014. Analysis of the point of inflexion on the scree plot suggests the likelihood of six factors. A confirmatory factor analysis, which indicates six factors, as proposed by previous research is done. Six factors explained 44.62% of the variance. The scree plot justified retaining six factors. (Refer to Figure 3.) The cut-off value for KMO of individual items was .3 due to the large sample size.

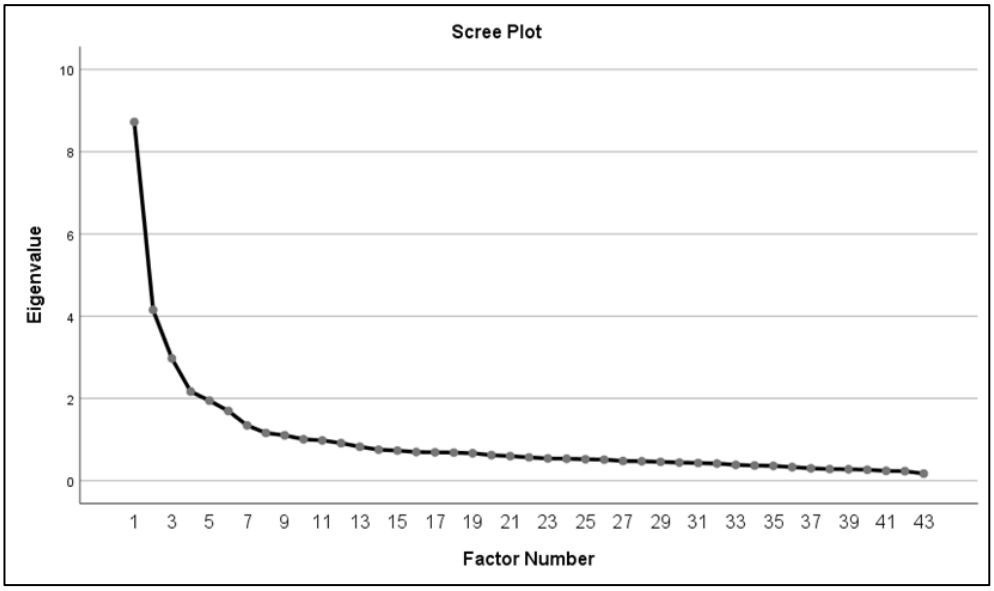

Figure 3. Openness to experience scree plot

Table 3.

Openness to experience items dropped after factor analysis

Items dropped for Openness to Experience Scale after Factor Analysis (n = 398)
Insignificant loadings, KMO value of item <.3
OPCuriosityQ19 I don't like trying new things and would rather stick with what I know.
OPCuriosityQ21 I have never really been interested in science.
OPCuriosityQ22 I seldom seek new opportunities to extend my knowledge.
OPToleranceQ40 I like to hear different people's view on political issues.
OPDepthQ46 I believe in-depth discussions a complete waste of time.
OPDepthQ51 For me personal growth is more important than success.
OPDepthQ54 I am fascinated by meditation and processes which encourage one to look inward.
Cross loading. The item loaded on more than one factor.
OPToleranceQ41I understand that people can have different attitudes toward certain things that I do.
OPToleranceQ42 Like most people I am open to listening to what others have to say.
OPDepthQ53 For me, there is nothing better than taking the time to think deeply about something.
Erroneous loading. The item loaded on the wrong factor.
OPDepthQ50 I take the time to reflect on my thoughts and actions.

Items dropped due to insignificant, cross, and erroneous loadings.

This study dropped items that had erroneous or insignificant loadings. (Refer to Table 3.) The research conducted confirmatory factor analysis indicating six factors on the remaining 43 items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure now verified the sampling adequacy for the analysis, KMO = .88, which is "meritorious" according to Hutcheson and Sofroniou (1999). Bartlett's test of sphericity is significant.

Six factors of openness to experience retained.

The six factors in combination now explained 50.37% of the variance, which is an improvement. Scree plot analysis justify retaining six factors. The 43 items loaded correctly on the six factors after rotation converged in 12 iterations. The six factors are intellectual, ingenuity, curiosity, aesthetics, tolerance, and depth. (Refer to Figure 4.)

Reliability analysis of sub-scales.

The six factors: intellectual, ingenuity, curiosity, aesthetics, tolerance and depth, all have acceptable to good reliabilities.

Cronbach's $\alpha = .86$, $\alpha = .86$, $\alpha = .68$, $\alpha = .88$, $\alpha = .66$, $\alpha = .80$, respectively.

Reliability analysis of overall scale.

The study also utilised the scale as an overall construct. The Cronbach's alpha for Openness to experience (Overall), $\alpha = .90$

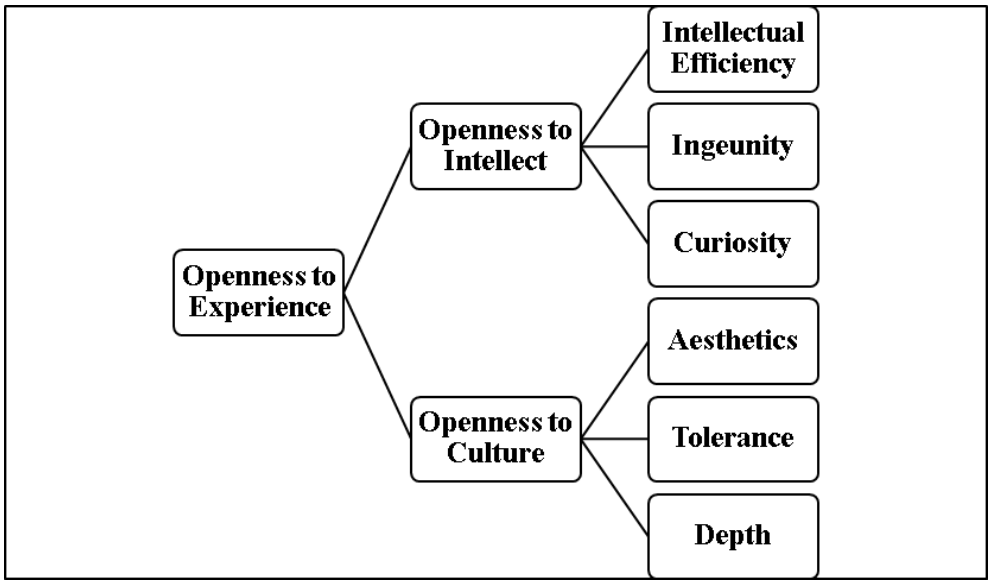

Figure 4. Openness to experience as a global factor, its two aspects, and its six sub-facets

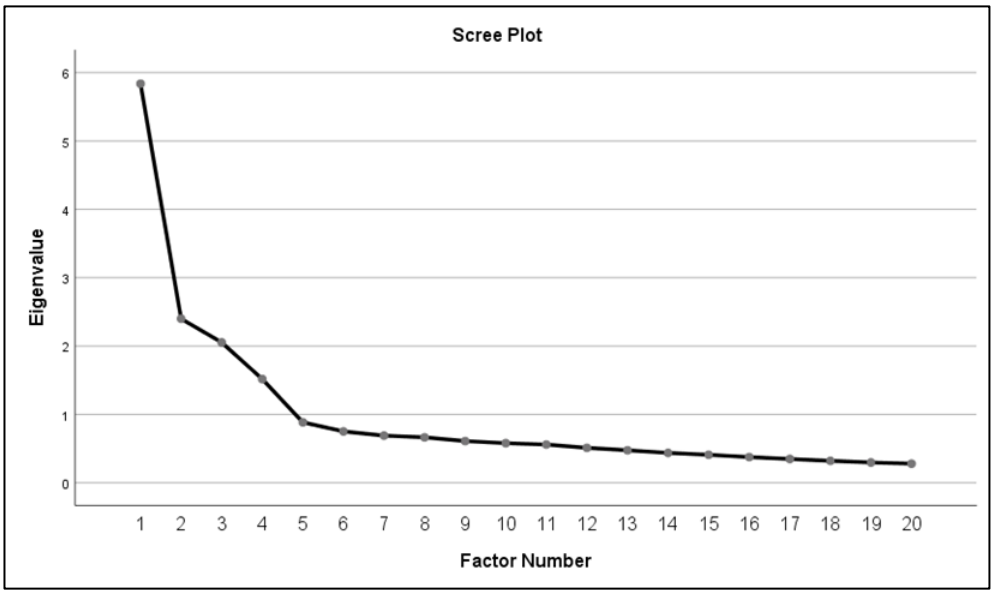

Figure 5. Cultural intelligence scree plot

Cultural intelligence.

This study conducted an exploratory factor analysis on the 20 items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis. KMO = .86, which is "meritorious" according to Hutcheson and Sofroniou (1999). Bartlett's test of sphericity is significant. Principal axis factoring presented four factors, with eigenvalues over Kaiser's criteria of 1, which in combination explained 59.04% of the variance. Ang & Van Dyne (2008) supports this finding. Scree plot analysis

justify retaining four factors. (Refer to Figure 5.) The cut-off value for KMO of individual items was .3.

All items loaded correctly, and four factors retained.

This study analysed the pattern matrix and reported that the 20 items loaded correctly on the four factors after rotation converged in 7 iterations. The four factors are: metacognitive, cognitive, motivational and behavioural. (Refer to Figure 6.)

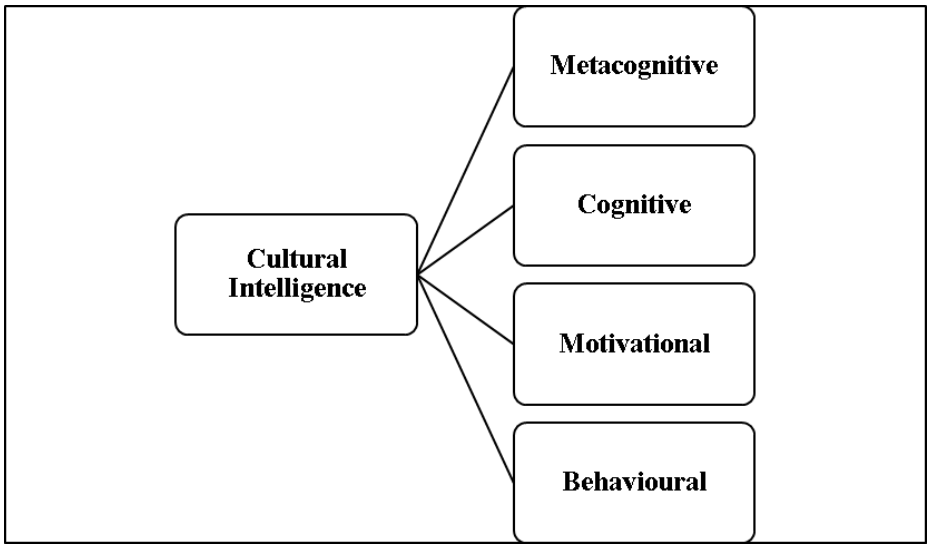

Figure 6. Cultural intelligence and its four facets

Reliability analysis of sub-scales.

The four facets: metacognitive, cognitive, motivational and behavioural all have good reliabilities.

Cronbach's $\alpha = .79$, $\alpha = .83$, $\alpha = .81$, $\alpha = .82$, respectively.

Reliability analysis of overall scale.

This study also utilised the scale as an overall construct. The Cronbach's alpha for Cultural intelligence (Overall), $\alpha = .87$.

Innovative work behaviour.

This study conducted an exploratory factor analysis on the ten items with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis. KMO = .91, which is “marvellous” according to Hutcheson and Sofroniou (1999). Bartlett’s test of sphericity is significant.

All items loaded on two factors.

Principal axis factoring presented two factors, with eigenvalues over Kaiser’s criteria of 1, which in combination explained 60.31% of the variance. This finding contrasts with De Jong and Den Hartog (2010) research, which proposed four factors. Scree plot analysis justify retaining two factors. (Refer to Figure 7.) The cut-off value for KMO of individual items was at .3. This study analysed the pattern matrix and reported that the ten items loaded correctly on the two factors after rotation converged in 6 iterations. IWBQ1, IWBQ2, IWBQ3, IWBQ4 & IWBQ5 loaded on factor 1. IWBQ5, IWBQ6, IWBQ7, IWBQ8, IWBQ9, IWBQ10 loaded on factor 2.

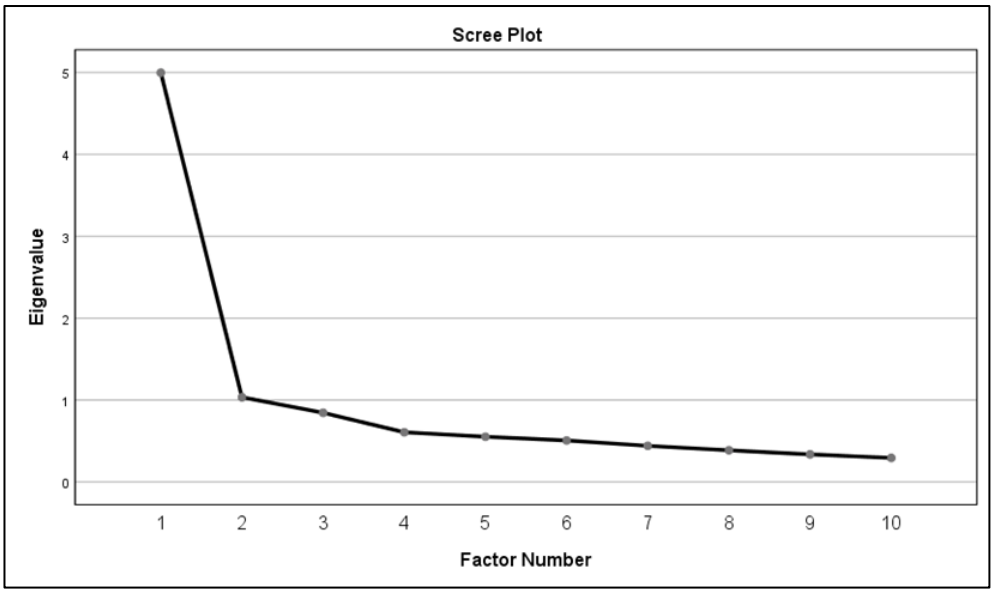

Figure 7. Innovative work behaviour scree plot

According to De Jong and Den Hartog (2010), previous researchers have proposed innovative work behaviour as a single factor construct as well as a multi-dimensional one. In their study, they discovered four factors. Factor 1: Idea generation; Factor 2: Idea exploration; Factor 3: Idea championing; Factor 4: Idea implementation.

In this current study, the analysis showed that items in "idea generation" and "idea exploration" combine into the first factor, whereas items in "idea championing" and "idea implementation" combine into the second factor.

Innovative work behaviour is made up of two-dimensions.

This study posits the possibility of a two-factor model of innovative work behaviour. (Refer to Figure 8.)

Combining idea generation + idea exploration.

The first five items suggest idea generation and idea exploration as an individuals' internal processes.

Combining idea championing + idea implementation.

The next five items appear to suggest idea championing and idea implementation as requiring external concrete actions. Hence, the first factor is "Internal innovative processes" and the second factor is "External innovative processes.

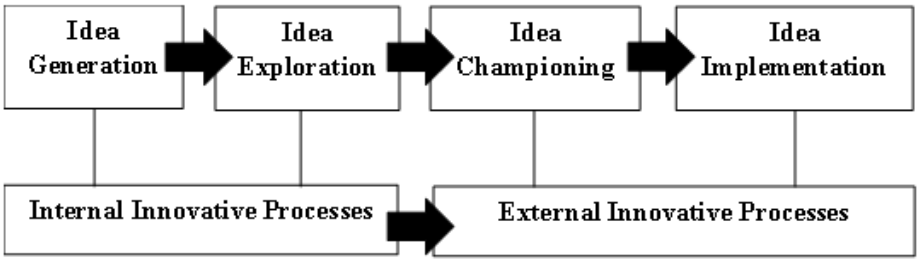

Figure 8. Proposed dimensions of innovative work behaviour (Adapted from Dorenbosch et al., 2005)

Internal innovative processes and external innovative processes.

This study proposes further study into these two factors by other researchers. Based on Dorenbosch et al. (2005), this study replicated a conceptual model for the two stages of innovative work behaviour (Refer to Figure 8.)

However, for this study, innovative work behaviour will be mainly assessed as a single construct, as informed by Korzilius et al. (2017). Examining innovative work behaviour as a single construct will ease investigation into multiculturalism, openness to experience and innovative work behaviour. This study will discuss the implications of the two-dimensional model in additional findings.

Reliability analysis of proposed two-dimensions.

The two-dimensions: internal innovative processes and external innovative processes both have good reliabilities.

Cronbach's $\alpha = .76$ and $\alpha = .80$, respectively.

Reliability analysis of overall scale.

As a single factor, the innovative work behaviour scale has good reliability. Cronbach's $\alpha = .89$.

ANOVA Analysis

Comparing the means of gender groups.

This study investigated the mean differences for openness to experience, cultural intelligence and innovative work behaviour for the gender category. The three categories are Male, Female and Other. There were 314 females, 80 males, and four others. The analysis used Hochberg's GT2 test because of the difference in sample size. Also, it did not violate Levene's test. The variance was similar.

Non-significant effect of gender on openness to experience.

The main effect of gender on openness to experience scores was not significant: $F = (2, 395) = 2.48$, p = n.s.

Non-significant effect of gender on innovative work behaviour.

The main effect of gender on innovative work behaviour scores was not significant: $F = (2, 395) = 1.30$, p = n.s.

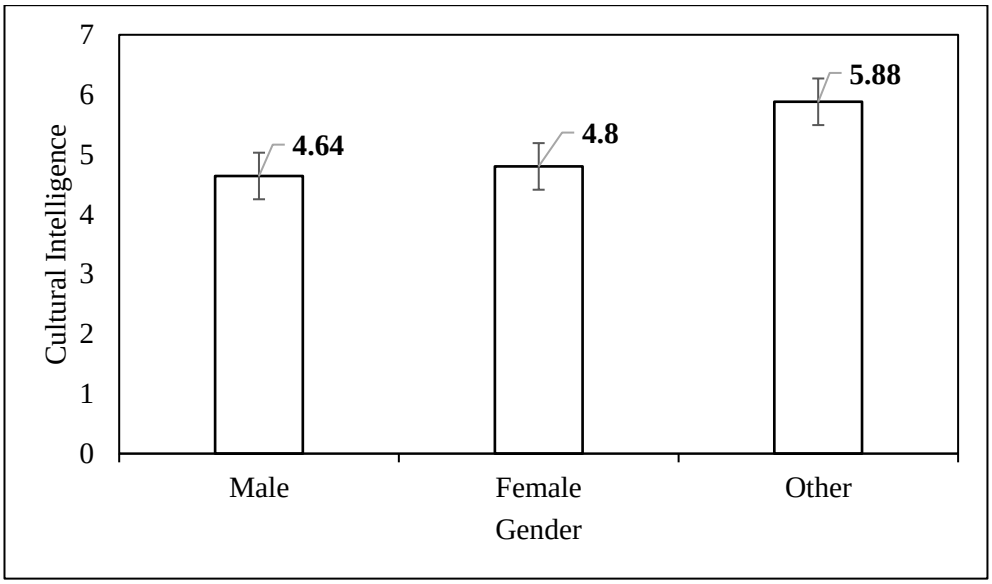

Figure 9. The main effect of gender on cultural intelligence

The significant main effect of gender on cultural intelligence.

The analysis found a significant main effect of gender on cultural intelligence scores. (Refer to Figure 9.) $F(2, 395) = 7.43$, $p = .001$. After post-hoc analysis, participants in the "Other" category reported significantly higher cultural intelligence score ($M = 5.88$, $SD = 0.18$) than Females ($M = 4.80$, SD = 0.65) and Males ($M = 4.64$, $SD = 0.70$). The "Other" gender represents participants who identify as gender fluid, non-binary and Takatāpui.

Comparing the means of ethnicity and age categories.

This study investigated the mean differences for openness to experience, cultural intelligence and innovative work behaviour for the ethnicity and age categories.

The non-significant effect of ethnicity and age, on openness to experience, cultural intelligence, and innovative work behaviour.

There are no mean differences for openness to experience, cultural intelligence, and innovative work behaviour scores for the ethnicity and age categories.

Comparing the means of cultural identity groups.

This study investigated the mean differences for openness to experience, cultural intelligence and innovative work behaviour for the cultural identity category. The three categories are: Monocultural, Bicultural and Multicultural. There were 180 monocultural, 117 bicultural and 101 multicultural participants. The analysis used Gabriel's procedure because of the slight difference in sample size. Also, it did not violate Levene's test. The variance was similar and acceptable.

The non-significant effect of cultural identity on openness to experience.

The main effect of cultural identity on openness to experience personality trait was not significant, $F(2, 395) = 0.63$, p = n.s. Monocultural, bicultural, and multicultural participants did not differ on the reported levels of openness to experience personality score. ***Hypothesis 2A is not supported here.***

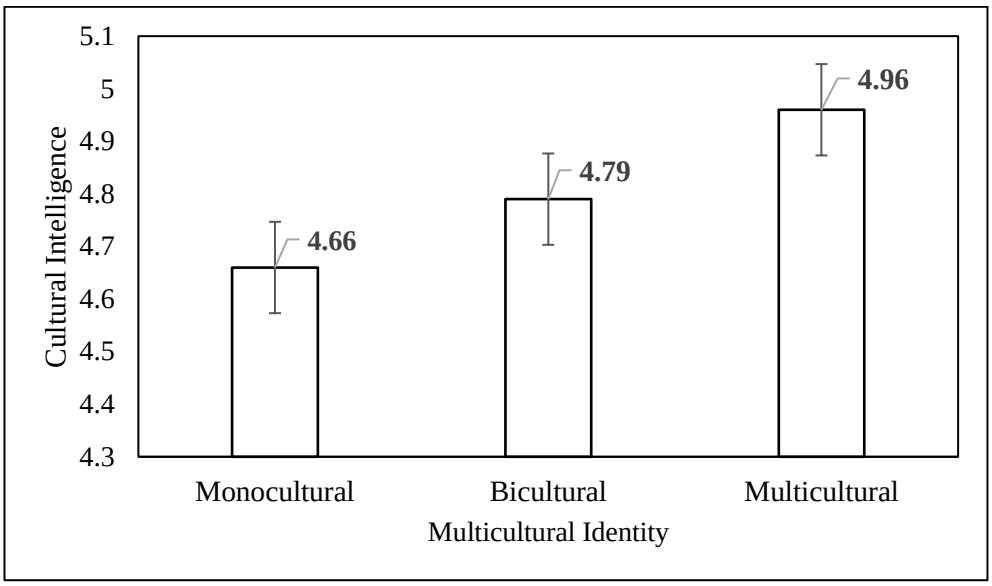

Figure 10. The main effect of multicultural identity on cultural intelligence

The significant main effect of cultural identity on cultural intelligence.

The main effect of cultural identity on cultural intelligence was significant, $F(2, 395) = 6.42$, $p = 0.002$. Multicultural participants ($M = 4.95$, $SD = 0.63$) reported significantly higher levels of cultural intelligence than bicultural ($M = 4.79$, $SD = 0.67$) and monocultural participants ($M = 4.66$, $SD = .67$). (Refer to Figure 10.) ***Hypothesis 2B is supported here.***

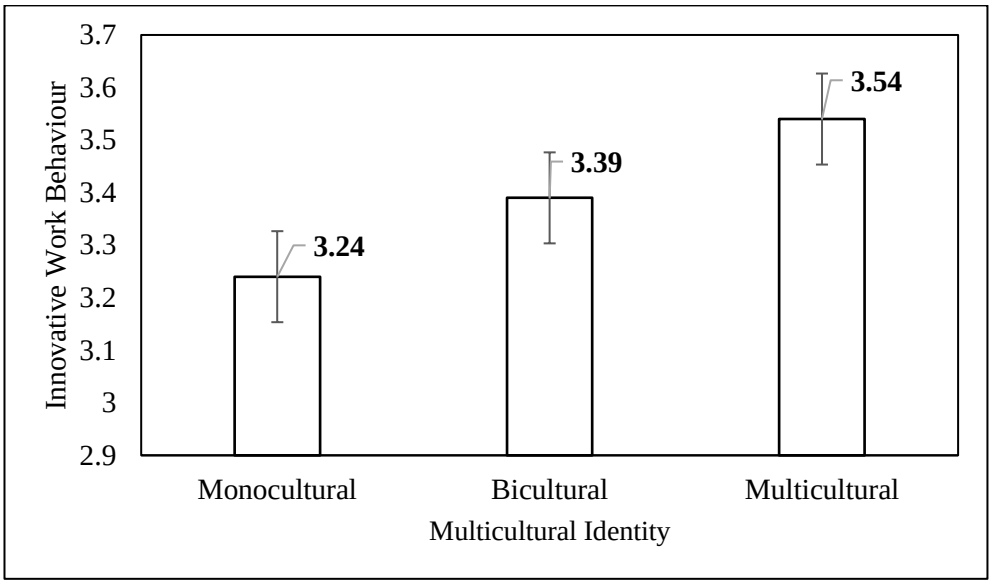

Figure 11. The main effect of multicultural identity on innovative work behaviour

The significant main effect of cultural identity on innovative work behaviour.

The main effect of cultural identity on innovative work behaviour was significant, $F(2, 395) = 8.86$, $p = 0.000$. Multicultural participants ($M = 3.54$, $SD = 0.52$) reported significantly higher levels of innovative work behaviour than bicultural ($M = 3.39$, $SD = .61$) and monocultural participants ($M = 3.24$, $SD = .61$). ***Hypothesis 2C is supported here.***

Correlational Analysis

Table 4.

Correlational analysis of multicultural identity, openness to experience, cultural intelligence and innovative work behaviour after SDR filtering

Correlational Analysis of Multicultural Identity, Openness to Experience, Cultural Intelligence and Innovative Work Behaviour (n=398)				
	Multicultural Identity	Openness to Experience	Cultural Intelligence	Innovative Work Behaviour
Multicultural Identity	1	.001	**.18****	**.21****
Openness to Experience	.	1	**.42****	**.41****
Cultural Intelligence			1	**.30****
Innovative Work Behaviour				1

Note: **Correlation is significant at the 0.01 level (2-tailed).

The positive correlation between multicultural identity and cultural intelligence.

Multicultural identity and cultural intelligence were significantly correlated, r = .18, p = 0.000. The correlation constitutes a small to medium effect size.

The positive correlation between multicultural identity and innovative work behaviour.

Multicultural identity and innovative work behaviour were significantly correlated, r = .21, p = 0.000. The correlation constitutes a small to medium effect size.

Non-significant correlation between multicultural identity and openness to experience.

There was a nonsignificant correlation of .001 (p = n.s) between multicultural identity and openness to experience.

The positive correlation between openness to experience and cultural intelligence.

Openness to experience and cultural intelligence were significantly correlated, $r = .42$, $p = 0.000$. The correlation constitutes a medium to large effect size.

The positive correlation between openness to experience and innovative work behaviour.

Openness to experience and innovative work behaviour were significantly correlated, $r = .41$, $p = 0.000$. The correlation constitutes a medium to large effect size.

The positive correlation between cultural intelligence and innovative work behaviour.

Cultural intelligence and innovative work behaviour were significantly correlated, $r = .30$, $p = 0.00$. The correlation constitutes a medium effect size.

Regression Analysis

This analysis aims to observe the strength of the predictors on the outcome variable in a linear model.

Openness to experience personality trait significantly predicts cultural intelligence.

Regression analysis tested if the openness to experience personality trait significantly predicted participants' cultural intelligence. The results of the regression indicated the single predictor explained 17.5% of the variance (*b* =.42, *F*(1, 396) = 85.42, p = .00). Openness to experience personality trait has a medium to large effect on cultural intelligence. ***Hypothesis 3A is supported here.***

Openness to experience personality trait significantly predicts innovative work behaviour.

Regression analysis tested if the openness to experience personality trait significantly predicted participants' innovative work behaviour. The results of the regression indicated the single predictor explained 16.9% of the variance (*b* =.41, *F*(1, 396) = 81.57, p = .00). Openness to experience personality trait has a medium to large effect on innovative work behaviour. ***Hypothesis 3B is supported here.***

Cultural intelligence significantly predicts innovative work behaviour.

Regression analysis tested if cultural intelligence significantly predicted participants' innovative work behaviour. The results of the regression indicated the single predictor explained 8.9% of the variance (*b* =.30, *F*(1, 396) = 39.71, p = .00). Cultural intelligence has a medium effect on innovative work behaviour. ***Hypothesis 3C is supported here.***

Multicultural identity significantly predicts cultural intelligence.

Regression analysis tested if multicultural identity significantly predicted participants' cultural intelligence. The results of the regression indicated the single predictor explained 2.9% of the variance (b =.18, $F(1, 396) = 12.79$, p = .00). Multicultural identity has a small to medium effect on cultural intelligence. ***Hypothesis 4A is supported here.***

Multicultural identity significantly predicts innovative work behaviour.

Regression analysis tested if multicultural identity significantly predicted participants' innovative work behaviour. The results of the regression indicated the single predictor explained 4.1% of the variance (b =.21, F (1, 396) = 17.76, p = .00). Multicultural identity has a small to large effect on innovative work behaviour. ***Hypothesis 4B is supported here.***

Multicultural identity, openness to experience and cultural intelligence significantly predicts innovative work behaviour.

Multiple regression analysis was used to test if the participants' characteristics (identity, personality, and intelligence) combined significantly predicted participants' innovative work behaviour. The results of the regression indicated that the three predictors explained 21.8% of the variance (b = .47, $F(3,394) = 37.92$, p = .00). It was found that multicultural identity significantly predicted innovative work behaviour (b = .19, p = .00), as did openness to experience personality trait (b = .36, p = .00), and cultural intelligence (b = .12, p = .02). Durbin- Watson statistic shows 2.08. It is neither less than 1 or greater than 3. Also, it is close to 2; hence the assumption that the errors are independent is met according to Field (2013). There is no multicollinearity for the three predictors (1.22, 1.04, 1.26). None of the values is more than 10, and on average, the mean value is not substantially greater than 1 (Field, 2013). The three predictors together accounted for incremental variance contributing to innovative work behaviour, instead of a single predictor.

Mediation Analysis

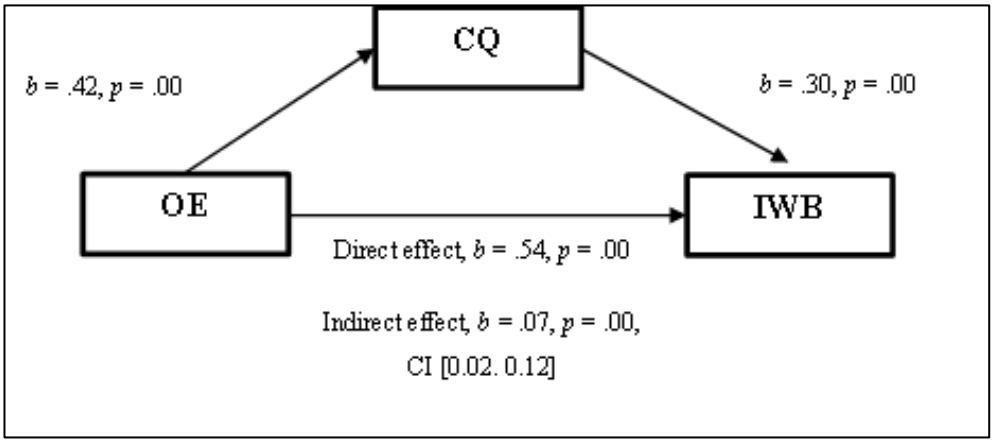

Figure 12. A mediation model of openness to experience and innovative work behaviour

Openness to experience (broad factor) contributes to innovative work behaviour, mediated by cultural intelligence.

There is a significant indirect effect of openness to experience personality trait on innovative work behaviour through cultural intelligence. $b = 0.07$, BCa CI [0.02, 0.12]. (Refer to Figure 12 and Table 5.) The effect size as kappa squared is not reported here due to recent research by Wen & Fan (2015), which discovered flaws in the method. Its usage in mediation analysis is advised against and confirmed by Miočević et al. (2018). They proposed the use of traditional proportion mediation (Pm) for basic mediation models. Following their recommendations, The Pm reported was 10.94%, using completely standardised indirect effect values.

Pm % = Indirect effect (Completely standardised)/ Total effect x 100.

This study considers the Pm of 10.94% for broad factor openness to experience substantial, although its indirect effect did not become insignificant $p > .05$. Regardless, it can still be considered a partial mediation because of the effect of openness to experience on innovative work behaviour diminishes with cultural intelligence as the mediator. ***Hypothesis 3D is supported here.***

Sub-facets of openness to experience contribute to innovative work behaviour, mediated by cultural intelligence.

The analysis shows full mediation for the lower-order facets of aesthetics and tolerance. Full mediation means that the indirect effect of the two facets became insignificant, after the introduction of cultural intelligence as a mediator. The lower-order facet depth also shows a relatively high Pm at 26.09%. Woo et al. (2014) propose the hierarchical structure of the broad factor openness to experience. The broad factor divides into two aspects: Openness to intellect and Openness to cultural experience. The first three sub-facets- Intellect, Ingenuity, and Curiosity are supposed to be under the openness to intellect aspect. The last three sub-facets- Aesthetics, Tolerance, and Depth are supposed to be under the Openness to cultural experience aspect. The distinction may explain the higher proportion of Openness to cultural experience sub-facets mediated by cultural intelligence to contribute to innovative work behaviour. Oolders et al. (2008) study support this finding. Oolders et al. (2008) found that tolerance and depth facets of openness to experience are fully mediated by cultural intelligence to contribute to adaptive performance, which they expected.

Taking the average Pm values of the three sub-facets for the Openness to intellect aspect = 16.8%. Taking the average Pm values of the three sub-facets for the Openness to cultural experience aspect = 46.67%

From the two PM values calculated above, this research can assume that a higher proportion variance of the openness to culture sub-facets are mediated compared to the openness to intellect sub-facets because of the mechanism of cultural intelligence.

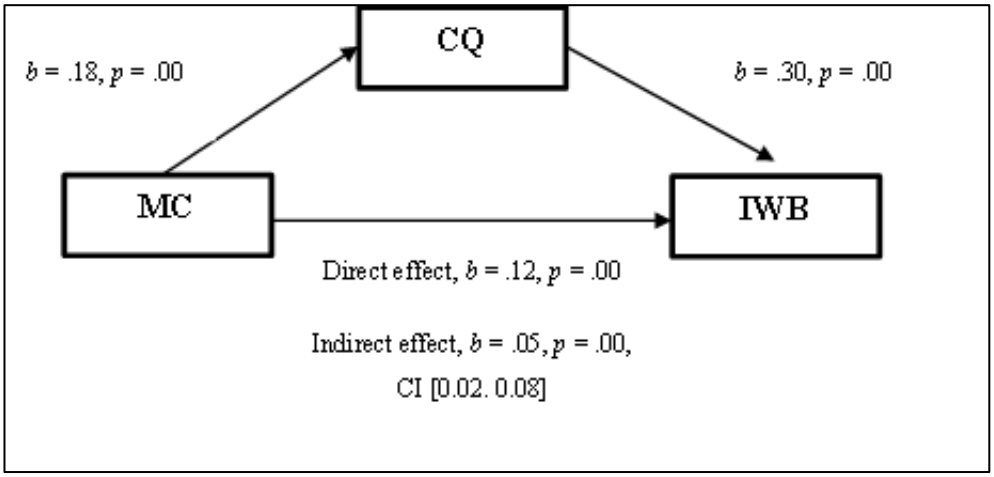

Figure 13. A mediation model of multicultural identity and innovative work behaviour

Multicultural identity contributes to innovative work behaviour, mediated by cultural intelligence.

There is a significant indirect effect of multicultural identity on innovative work behaviour through cultural intelligence. b = 0.05, BCa CI [0.02, 0.08]. (Refer to Figure 13 and Table 5.) ***Hypothesis 4C is supported here.*** The effect size as kappa squared is not reported here due to recent research by Wen & Fan (2015), which discovered flaws in the method. Its usage in mediation analysis is advised against and confirmed by Miočević et al. (2018). They proposed the use of traditional proportion mediation (Pm) for basic mediation models.

Following their recommendations, The Pm reported was 33.33%, using completely standardised indirect effect values.

Pm % = Indirect effect (Completely standardised)/ Total effect x 100.

The Pm of 33.33% for multicultural identity is substantial, although its indirect effect did not become insignificant $p > .05$. Regardless, it can still be considered a partial mediation. Comparing the Pm of multicultural identity with the sub-facets of openness to intellect, the mediation appears to be greater possibly because of the mechanism of cultural intelligence.

Caveat for this mediation analysis.

This study provides the caveat that proportion mediated as a measure of effects size for mediation has its flaws. According to Field (2013), Pm is unstable in samples of less than 500. For this study, it provided a superficial visualisation of results and interpreted with caution. Also, this study leaves out kappa-squared by Preacher and Kelly due to newly discovered errors by Wen and Fan (2015).

This study has included the index of mediation (completely standardised indirect effect). The index of mediation can be useful for comparing across different mediation models, in this case, openness to experience personality trait and multicultural identity. It will be beneficial for any other researchers who may want to include it in their future meta-analysis. Also, it includes the bootstrapped confidence intervals and total R-square from the regression analysis. Baron and Kenny's research, as cited by Field (2013), informs the process of mediation analysis in this study. All predictor variables are significantly and positively correlated and predict the outcome variable. The introduction of the mediator variable (cultural intelligence) causes the predictor variables (Openness to experience personality trait or multicultural identity) to predict the outcome variable (innovative work behaviour) less strongly than the previous model.

This study acknowledges the caution by Field (2013) regarding the possible rigidity in conceptualising mediation as full or partial from the changes in significance value. Table 5 includes the partial/full mediation indicator as supplementary data. Interpretation of results is made in conjunction with the index of mediation and bootstrapped confidence intervals.

Table 5.

Mediation analysis for openness to experience, multicultural identity contributing to innovative work behaviour, mediated by cultural intelligence

Mediation Results for Openness to Experience and Its Six Facets, Multicultural Identity, Mediated by Cultural Intelligence
(n = 398)

Type	Variable	Total Effect	Direct Effect	Indirect Effect (Completely Standardised)	P_M	BCA CI	Mediation	Total R^2
Broad Factor	Openness to Experience (mediated by) Cultural Intelligence	*b* = 0.64, *p* = .00	*b* = 0.54, *p* = .00	*b* = 0.07	10.94%	95% [0.02, 0.12]	Partial	.19
Lower-order facet 1	Intellectual (mediated by) Cultural Intelligence	*b* = 0.24, *p* = .00	*b* = 0.19, *p* = .00	*b* = 0.06	25.00%	95% [0.02, 0.10]	Partial	.13
Lower-order facet 2	Ingenuity (mediated by) Cultural Intelligence	*b* = 0.45, *p* = .00	*b* = 0.40, *p* = .00	*b* = 0.05	11.11%	95% [0.02, 0.08]	Partial	.28
Lower-order facet 3	Curiosity (mediated by) Cultural Intelligence	*b* = 0.42, *p* = .00	*b* = 0.34, *p* = .00	*b* = 0.06	14.29%	95% [0.03, 0.11]	Partial	.16
Lower-order facet 4	Aesthetics (mediated by) Cultural Intelligence	*b* = 0.13, *p* = .00	*b* = 0.07, *p* = .08	*b* = 0.08	61.54%	95% [0.04, 0.13]	**Full**	.10
Lower-order facet 5	Tolerance (mediated by) Cultural Intelligence	*b* = 0.21, *p* = .00	*b* = 0.06, *p* = .39	*b* = 0.11	52.38%	95% [0.06, 0.17]	**Full**	.09
Lower-order facet 6	Depth (mediated by) Cultural Intelligence	*b* = 0.23, *p* = .00	*b* = 0.16, *p* = .00	*b* = 0.06	26.09%	95% [0.03, 0.11]	Partial	.11
Broad Factor	Multicultural Identity (mediated by) Cultural Intelligence	*b* = 0.15, *p* = .00	*b* = 0.12, *p* = .00	*b* = 0.05	33.33%	95% [0.02, 0.08]	Partial	.12

Note: Innovative work behaviour is the dependent variable in all mediation using Haye's PROCESS tool version 3.1
The P_M (the ratio of the indirect effect on the total effect)

Table 6.

Correlational analysis of sub-facets of openness to experience, cultural intelligence, and innovative work behaviour

Correlational Analysis of the six sub-facets of Openness to Experience, four sub-facets of Cultural Intelligence and Innovative Work Behaviour (n = 398)

	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioural CQ	Intellectual OP	Ingenuity OP	Curiosity OP	Aesthetics OP	Tolerance OP	Depth OP	Innovative Work Behaviour	Internal Innovative Processes	External Innovative Processes	I-E Diff
Metacognitive CQ	1	**.35****	**.42****	**.40****	**.15****	**.22****	**.23****	**.16****	**.35****	**.13****	**.25****	**.20****	**.24****	**-.04**
Cognitive CQ		1	**.29****	**.29****	**.18****	**.18****	**.17****	**.30****	**.15****	**.15****	**.16****	**.10****	**.18****	**-.08**
Motivational CQ			1	**.31****	**.16****	**.23****	**.21****	**.17****	**.43****	**.18****	**.32****	**.29****	**.30****	**-.01**
Behavioural CQ				1	**.14****	**.14****	**.23****	**.14****	**.25****	**.19****	**.17****	**.18****	**.13****	**.05**
Intellectual OP					1	**.29****	**.42****	**.18****	**.21****	**.26****	**.26****	**.25****	**.22****	**.03**
Ingenuity OP						1	**.35****	**.43****	**.18****	**.28****	**.49****	**.44****	**.46****	**-.02**
Curiosity OP							1	**.30****	**.26****	**.46****	**.34****	**.41****	**.24****	**.17**
Aesthetics OP								1	**.28****	**.44****	**.17****	**.17****	**.14****	**.03**
Tolerance OP									1	**.38****	**.16****	**.17****	**.12****	**.05**
Depth OP										1	**.20****	**.25****	**.13****	**.12**
Innovative Work Behaviour											1	**.89****	**.93****	
Internal Innovative Processes												1	**.67****	

Note: **Correlation is significant at the 0.01 level (2-tailed).

Supplementary Findings

Correlational Analysis of sub-facets of Openness to Experience, Cultural Intelligence, and Innovative Work Behaviour

From Table 6, this study reports that all the sub-facets of openness to experience and cultural intelligence are significantly and positively related to overall innovative work behaviour at a 0.01 significance level. The effect sizes range from small to large. **Hypotheses 5A and Hypotheses 5B are supported here.**

Creating a Culturally-Aware Workplace

This study will explore the critical sub-facets of openness to experience personality trait associated with cultural intelligence.

Tolerance.

The tolerance sub-facet of openness to experience presents to be most salient toward cultural intelligence. It contributes a small to medium effect on three sub-facets of cultural intelligence- metacognitive, motivational and behavioural (r = .35; r = .43 and r = .25, respectively) at a 0.01 significance level. (Refer to Table 5 for data comparison.)

Aesthetics.

The aesthetics facet of openness to experience presents to be the most salient toward the cognitive aspect of cultural intelligence (r = .30) with a medium effect. This study expects these effects because tolerance and aesthetics belong to the openness to culture aspect of openness to experience personality trait. The broad factor divides into the two aspect levels, (openness to intellect and openness to culture), before sub-dividing into the six sub-facets.

Creating a Pro-Innovation Organisation

This study will explore the most critical sub-facets of openness to experience personality trait and cultural intelligence associated with innovative work behaviour.

Ingenuity and curiosity.

The ingenuity and curiosity sub-facets of openness to experience presents to be most salient toward innovative work behaviour. Both sub-facets (ingenuity and curiosity) contribute a medium to large effect toward innovative work behaviour (r = .49, r = .34, respectively) at a 0.01 significance level.

Motivational and metacognitive cultural intelligence.

The motivational and metacognitive sub-facets of cultural intelligence present to be most salient towards innovative work behaviour. Both sub-facets (motivational and metacognitive) contribute a medium effect toward innovative work behaviour (r = .32, r = .25, respectively) at a 0.01 significance level.

Caveat for Supplementary Findings

From previous research literature and regression analysis, this study assumes the direction of the effect from the correlational analysis in Table 5. If the overall broad factor construct predicts the outcome variable, then their sub-facets should as well.

Exploring the two-dimensions of Innovative Work Behaviour

This study proposes two dimensions of innovative work behaviour. Both dimensions correlate with one another at (r = .67). Regression analysis showed that the two dimensions are not multicollinear, with VIF values less than 10. Factor analysis shows that the first-dimension accounts for 49.97% of the variance, and the second-dimension accounts for 10.34% of the variance.

The two dimensions appear to overlap but represent distinct stages of innovative work behaviour. The first dimension is the internal generative process. The first stage conceptually overlaps with creativity, which happens as brain-storming within the individual. The second stage conceptually overlaps with innovation in a concrete social way. The individual interacts with other people to get them on board with the novel idea and makes physical changes to their external environment.

Ingenuity and motivational cultural intelligence are critical to both internal and external innovative processes.

From cultural intelligence, the motivational sub-facet appears to contribute significantly to both internal (r = .29) and external innovative processes (r = .30). From openness to experience, the ingenuity sub-facet appears to contribute significantly to both internal (r = .44) and external innovative processes (r = .46).

Curiosity and depth contribute more to the internal innovative process than the external innovative process.

Of interest, the curiosity and depth sub- facets appear to be more critical for internal processes (r = .41; r = .25, respectively), as compared to external processes, with the most substantial difference in correlational values (I-E Diff = .17; I-E Diff = .12, respectively). This study encourages future researchers to investigate into these nuances.

Discussion

> Individuals who have a strong ability to empathise and relate to people in their own cultures might find the same empathetic, and social skills get them nowhere when interacting with someone from a different cultural background.
>
> —David Livermore, Leading with Cultural Intelligence, 2015

This research study aims to conceptualise a response to global trends. An increasingly diverse workforce requires cultural sensitivity. A fast-paced digital and technological workforce requires innovation. A millennial workforce with evolving perspectives requires an open global-mindset. This research reasserts that the four constructs: multicultural identity, openness to experience personality trait, cultural intelligence, and innovative work behaviour are vital for the future of work.

Most researchers have measured these constructs through participants' self-report. This process is susceptible to socially desirable responding bias. Participants feel the need to present themselves in a positive light. King and Bruner (2000) emphasise that social desirability bias has a crucial part to play in obscuring relationships among variables and producing artificial relationships among independent and dependent variables. This research included the Marlowe-Crowne scale to circumvent this phenomenon.

This research investigated the influence of socially desirable responding on openness to experience, cultural intelligence, and innovative work behaviour.

Hypothesis 1 is Supported. Findings showed that social desirability responding is positively related to openness to experience, cultural intelligence, and innovative work behaviour. The correlations between social desirability and the other three constructs show small to medium effects. This influence justifies the utilisation of a socially desirable responding scale in any self-report research design. Previous research supports this finding. Smeding, Dompnier and Darnon (2017) found

individual differences in perceived social desirability of openness to experiences. The researchers posit that social desirability responding is a common confounding factor present in self-report measures in personality research. Larson and Bradshaw (2017) found that social desirability bias correlates positively with cultural competence. Sarbescu et al. (2012) state that this bias becomes a more significant problem with controversial or sensitive issues like race attitudes. Young college students are also susceptible to socially desirable responding because they want to portray themselves as intellectual and knowledgeable in university contexts (Smeding et al., 2017).

This study can focus on the proposed relationships between constructs after addressing the confounding factor of socially desirable responding. Globalisation means increased migration. New Zealand has a large number of migrants coming into the country. By 2021, ethnic people apart from Maori and Pacific people are expected to increase to 18% of the population (SIngham, 2006). This changing diverse demographics mean that more people are becoming multicultural in identity. This study posits the multicultural identity as having positive benefits to the individual, workplace and nation. This study hypothesised that multicultural and bicultural individuals have a higher openness personality trait, higher cultural intelligence, higher innovative work behaviour, as compared to monocultural populations.

Hypothesis 2A is NOT Supported. Openness to experience scores is not significantly different in the monocultural, bicultural and multicultural populations. There may be a few explanations for this finding. Openness to experience conceptually associates with cross-cultural constructs. However, researchers have not sufficiently examined the direction of effect. Openness to experience appears to be a stable disposition. Schwaba and associates (2018) examined the life span development of openness to experience and whether this change correlates with variation in cultural activity. They discovered that on average, openness remained relatively stable in emerging adulthood before declining in midlife and old age. Openness to experience appears to be a trait that an individual is born with, regardless of cultural upbringing. Cukik (2014) shares biological origins to openness to

experience and physiological markers. Sparkman et al. (2016) discovered there is a causal impact of multicultural experience on openness to experience personality trait and intercultural prejudice. The more participants reported travelling abroad, having more culturally diverse friends, eaten different cultures' cuisines, the more likely they are high in openness. They claimed that experimental manipulation could influence openness to experience.

This research argues that there is a distinction between multicultural identity and multicultural experiences. A person who has a multicultural identity is more likely to have been exposed to more multicultural experiences. However, the individual may not have emotional attachments towards them, such that it constitutes to their identity and who they are as a human being. Nevertheless, individuals may still benefit from these experiences, because bicultural and multicultural participants have higher cultural intelligence and innovative work behaviour. These multicultural people may not be more open compared to their monocultural counterparts.

Syed (2013) posits that openness independently predicted multicultural ideology. However, ideology can be distinct from identity. He discovered that identity exploration and identity confusion interacted such that identity exploration was associated with multiculturalism when identity confusion was low, but not when identity confusion was high. This study posits that the participants in this current study who self-identified as multicultural may have the upbringing and experience, but did not actively integrate this identity to result in openness to experience. They may reap the benefits of cultural intelligence and innovative work behaviour, but not feel desire for new experiences.

There is the issue of whether temporal shifts in openness to experience is a lasting one or a disposition that one is born with regardless of multicultural or monocultural upbringing. The stability of the openness to experience personality trait brings about the biological nature vs nurture debate. If that is the case, then cultural intelligence can be acquired and trained, whereas it may be harder to manipulate openness to experience. Hiring managers should screen for this personality disposition, which

interacts with multicultural experiences and cultural intelligence to produce innovative work behaviour.

Hypothesis 2B is Supported. As hypothesised, this study found that cultural intelligence scores are significantly different in the monocultural, bicultural and multicultural populations. Previous research has shown a positive correlation between cultural identity and cultural intelligence (Korzilius et al., 2017). In their study, they used the same measure but merged the bicultural and multicultural categories. Multicultural individuals can be said to be more culturally competent because they have integrated multiple social identities from different sociocultural contexts, and are more sensitive to cultural cues. They have vast accessibility to knowledge systems (Leung & Chiu, 2010). The multicultural identity overlaps with cultural intelligence in the sense that the cognitive and metacognitive facets of cultural intelligence indicates a store of cultural knowledge and having the skill to process it into practical insights, to be applied in a strategic way given a context (Earley & Ang, 2003).

Hypothesis 2C is Supported. As hypothesised, innovative work behaviour scores are significantly different in the monocultural, bicultural and multicultural populations. Previous research supports the positive correlation between multicultural identity and innovative work behaviour (Korzilius et al., 2017). Individuals with a multicultural identity possess an abundant resource of diverse knowledge systems (Leung & Chiu, 2010). Bodla et al. (2008) assert that knowledge sharing predicts the relationship between diversity and creativity. Ahmed et al. (2018) posit that there is a causal relationship between knowledge sharing and innovative work behaviour.

Hypothesis 3A is Supported. As hypothesised, openness to experience scores is positively related to cultural intelligence. Previous research supports the positive correlation between openness to experience and cultural intelligence (Oolders et al., 2008; Ang & Van Dyne, 2008). Individuals who are high on openness to experience are receptive to gaining new knowledge from other cultures (Chen et al., 2016). They are more likely to accept differences between cultures, compared to individuals who

are not open-minded (Bhagat & Prien, 1996). They are less likely to stereotype and be biased towards people of other races (Flyn, 2005). Motivational cultural intelligence help individuals with the drive and desire to interact with those from other cultures, to learn and overcome potential obstacles.

Hypothesis 3B is Supported. As hypothesised, openness to experience scores is positively related to innovative work behaviour. There is currently no research that has directly investigated the relationship, but there is some conceptual overlap. There is a correlation between openness to experience and creativity. For example, the ingenuity sub-facet of openness to experience refers to those who enjoy using existing knowledge, ideas, products and combining them into something new in a creative manner (Woo et al., 2014). Similarly, innovation requires the acquiring of diverse knowledge, evaluating it, combining it and transforming it into something new (Golgeci et al., 2017).

Hypothesis 3C is Supported. As hypothesised, cultural intelligence scores are positively related to innovative work behaviour. Previous research supports the positive correlation between cultural intelligence and innovative work behaviour (Korzilius et al. 2007). Gagne (2009) assert that knowledge sharing is a vital process for innovation. It is the communication and relaying of information and ideas. Cultural intelligence provides individuals with the necessary cultural knowledge (Ang et al., 2007), as well as the cultural metacognition to capitalise on it (Thomas et al., 2015). Also, there is a causal relationship between knowledge flow and innovative work behaviour (Ahmed et al., 2018).

Hypothesis 3D is Supported. As hypothesised, cultural intelligence mediates between openness to experience and innovative work behaviour. Oolders et al. (2008) found that cultural intelligence mediates between openness to experience and adaptive performance. Adaptive performance is defined as the proficiency with which people alter their behaviour to meet the demands of the environment, an event, or a new situation (Pulakos et al., 2000). Adaptive performance and innovative work behaviour are distinct concepts, but there is some overlap. Both constructs imply a response to the

environment. In Oolder et al. (2008) study, the sub-facets in the openness to culture aspect of openness to experience were mediated in a higher proportion as compared to the sub-facets in the openness to intellect aspect. This study replicated similar findings, although the outcome variable is different.

Hypothesis 4A is Supported. As hypothesised, multicultural identity is positively related to cultural intelligence. Previous research supports the positive correlation between multicultural identity and cultural intelligence (Korzilius et al. 2007). (Refer to Hypothesis 2B).

Hypothesis 4B is Supported. As hypothesised, multicultural identity is positively related to innovative work behaviour. Previous research supports the positive correlation between multicultural identity and cultural intelligence (Korzilius et al. 2007). (Refer to Hypothesis 2C).

Hypothesis 4C is Supported. As hypothesised, cultural intelligence mediates between multicultural identity and innovative work behaviour. Previous research supports the mediation of multicultural identity on innovative work behaviour through cultural intelligence (Korzilius et al. 2007). The criteria for mediation to have occurred is that:

a) Multicultural identity needs to predict cultural intelligence *(Hypothesis 1)*
b) Cultural intelligence needs to predict innovative work behaviour. *(Hypothesis 3C)*
c) Multicultural identity needs to predict innovative work behaviour. *(Hypothesis 4B)*
d) Cultural intelligence introduced as a mediator into the model, causes the effect of multicultural identity on innovative work behaviour to diminish.
e) The reduction of effect strength means that there is a significant indirect effect. *(Hypothesis 4C)*

Hypothesis 5A is Supported. As hypothesised, openness to experience sub-facets (intellectual efficiency, ingenuity, curiosity, tolerance, aesthetics and depth) are positively related to overall innovative work behaviour.

Hypothesis 5B is Supported. As hypothesised, cultural intelligence sub-facets (metacognitive, cognitive, motivational and behavioural) are positively related to overall innovative work behaviour.

Practical Implications

Multicultural individuals have unique gifts for the workplace. Multicultural individuals are more empathetic (Brannen, Garcia & Thomas, 2009), flexible (Chiu & Hong, 2005), and adept at combining different ideas to create original solutions (Leung et al., 2008). Also, they can problem solve effectively in a global cross-cultural context. However, managers will need to nurture the right organisational environment, that can help them to thrive, and then utilise their talents (Fitzsimmons, 2013).

According to Brannen and Thomas (2010, p.13), organisations need to create environments in which bicultural people can thrive, in the form of organisational cultures in which the cultural diversity are recognised to exist within individuals, the same way we come to treat the cultural diversity between individuals as a valuable asset".

Hiring managers should screen employees for bicultural or a multicultural identity, openness to experience, cultural intelligence, and innovative work behaviour. Hiring managers need to take note that while multicultural individuals may be more culturally intelligent and innovative, they may not necessarily be more open to experience. This study recommends that hiring managers screen for openness to experience personality trait for all cultural identities.

For those who are monocultural, managers should take note that if they are high in openness to experience, they will be likely to benefit from cross-cultural training and become more competent in working with diversity. Also, hiring managers may benefit from the use of the Marlowe-crown social desirability scale when screening for personality. The test should be used in conjunction with other selection methods like interviews and reference checks.

Theoretical Implications

This research study will contribute to cross-cultural literature, personality, diversity-inclusion, and innovation literature. Most research looked at creativity at an individual level instead of innovative work behaviour. There is a distinction between creativity and innovation. While creativity is mainly an internal process, on the other hand, innovation implements and makes changes to the environment. Most research that looked at innovation focused on the organisational level instead of on the individual level. However, this study asserts that employee innovative work behaviour at an individual level contributes to the firm's overall innovative output.

This study covers a broad range of constructs. Korzilius et al. (2017) inform this research. This study reflected their findings, showing that cultural intelligence mediates between multicultural identity and innovative work behaviour. This research expands the literature base by looking at sub-facets of openness to experience, cultural intelligence, and proposed a new two-dimension innovative work behaviour construct that can spark further research.

This research study also includes the social desirability bias scale, which encourages other future researchers to incorporate it into their future self-report studies.

Strengths and Weaknesses

This research is the first amongst innovation and cultural research literature to investigate the relationships amongst multiple themes, as a response to global trends overall. It takes a more holistic conceptual approach that aims for relevance to what is going on in the world. It seeks to provide a springboard for other researchers to explore in depth the individual mechanisms. This research is one of the first few in personality, cultural and innovation research to include the Marlowe-Crowne social desirability scale. Research on attitudes toward cultural issues can be sensitive, and respondents would likely want to present themselves in the best light.

No research is without its limitations. The constructs are self-report and can be subjective. Bodla et al. (2008) mentioned that future research could use objective measures such as applied patents and copyrights for innovation. Also, Cukik (2014) suggested that there are biological origins of openness to experience. The sympathetic nervous system activation is crucial for understanding this phenomenon. “Aesthetic chills” has been reported to be the single best marker of openness to experience, irrespective of culture. Future research can examine aesthetic chills, cultural competence and innovation.

This current research is a cross-sectional study, and it is important to note that correlation does not imply causation. There is research showing that multicultural experiences and training do increase participants' cultural intelligence. Increasing participants' cultural intelligence will also make them display more innovative work behaviour. Regardless, if hiring managers were to hire employees with high cultural intelligence scores, then they are more likely to be innovative as well. Also, training employees in cultural intelligence have other benefits like working harmoniously in a culturally diverse team. This skill is useful for both expatriates, as well as locals who must work with colleagues from other countries.

The cultural makeup in the workforce is becoming more diverse. It is no longer enough for expatriates who go for overseas assignments to become more culturally intelligent and integrate. There is also a responsibility for local employees to become more culturally intelligent so that they can work with those from overseas and be open to learning in the process

Concluding Remarks

This research aims to make five propositions:

1) Multicultural individuals are more creative and are more likely to be innovative. They are more likely to display innovative work behaviour in the workplace. The multicultural employee who exhibits such habits will result in innovative output for their organisation.

2) Employees who have an open personality will be more open to experiences and people from other cultures. Globalisation means that the current and future workplace will become more diverse due to migration and fast-paced due to technological changes. The acceptance of change, the willingness to challenge the status quo, and the comfort in learning from people from other different backgrounds, is a necessary attribute in the future employee.

3) Cultural intelligence is an acquirable skill. Employees can train in this. Diverse workgroups have the potential for conflicts due to differences in perspectives. However, it has the highest potential for innovation if diverse views can be integrated to create something new. Cultural intelligence aids an individual to become more culturally sensitive, learn and share knowledge from people who think in unique ways. This skill can be taught to employees in an organisation by increasing the number of multicultural experiences and other professional training events. With cultural intelligence, this research proposes that people in diverse workgroups can overcome differences to become more innovative. They are more likely to exhibit innovative work behaviour.

4) This research has surveyed participants who are currently in university. The rationale behind this is that traditional research has focused on surveying current employees in the organisations. Depending on tenure, these employees, while having valuable experience, may have set ways of doing things. Surveying the university population signifies that they will be the next generation of employee workforce, and if the purpose of this research is forecasting the future of work, then it is vital to get the perspectives of this population group.

5) The results of this research have some implications for managerial decisions. Hiring managers may benefit from hiring individuals who are more bicultural and multicultural because they can switch between cognitive states, that allow them to remain sensitive to cultural differences while adapting to the fast-changing global economy. If employees are monocultural, they will benefit from a more open personality and higher cultural intelligence. The open personality may help them to become more global-minded. Managers can train cultural intelligence by exposing employees to multicultural experiences. An example of this will be students going for overseas experience, and this will be a buffer against ethnocentric attitudes. Employees who have more innovative working behaviour are more likely to help with the innovative output of the company. The age-old culture of not making waves in an organisation is detrimental to its adaptation to a fast-changing global environment. It is essential to be sensitive to trends, while also being the pioneers, challenging the status quo in creating new products and services that positively impact the world.

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Appendix A: Descriptive histograms

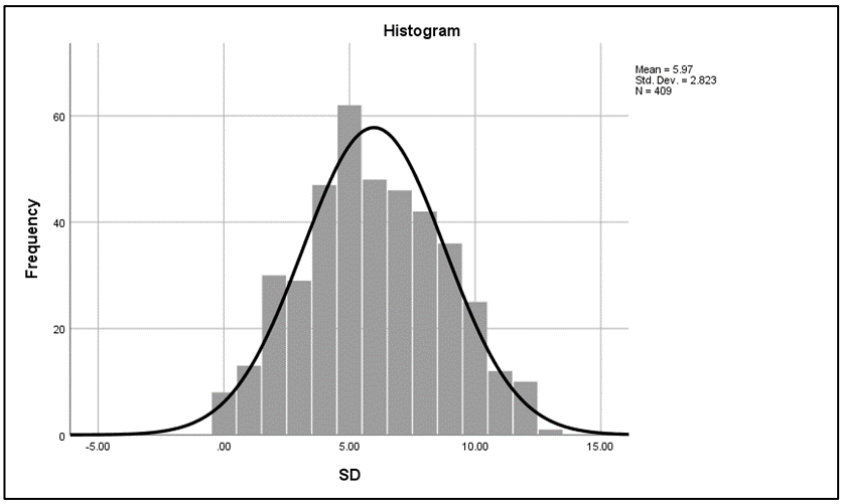

Figure 14. Distribution of social desirability scale

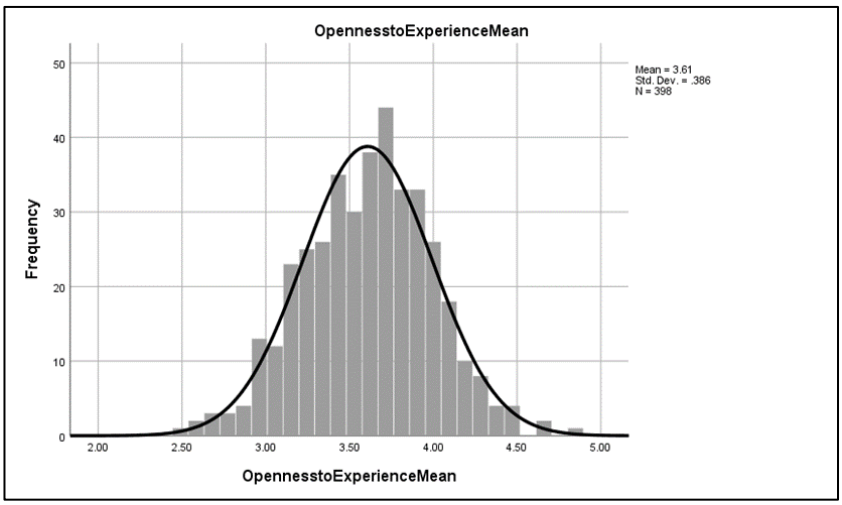

Figure 15. Distribution of openness to experience scale

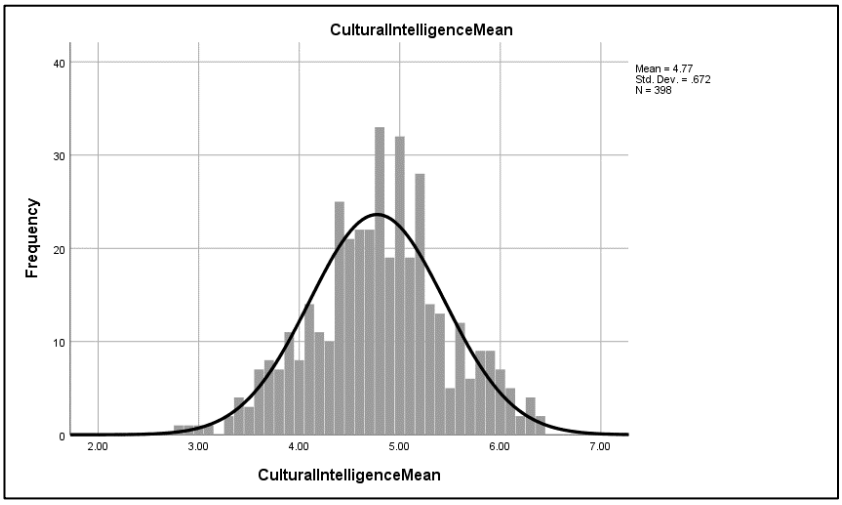

Figure 16. Distribution of cultural intelligence scale

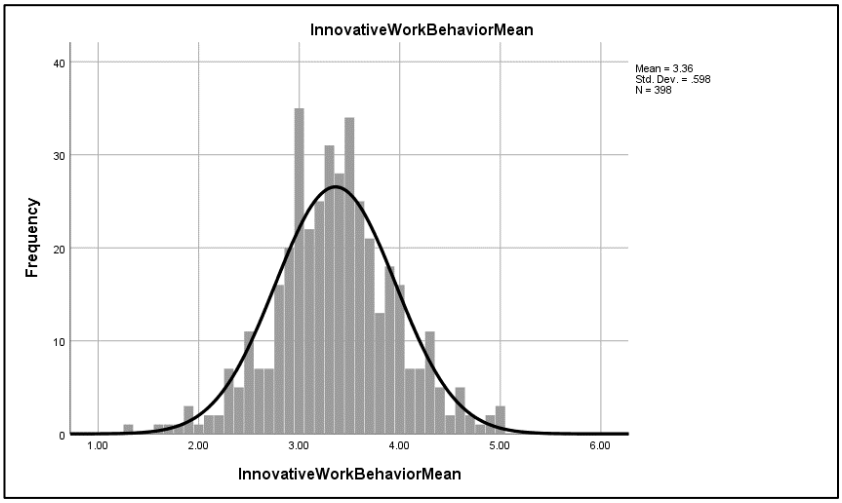

Figure 17. Distribution of innovative work behaviour scale

Appendix B: Questionnaires

Demographics Questionnaire

Choose the option that best applies to you, or fill in the "Other" field

What is your gender?

Male,
Female,
Other (please specify)

What is your ethnicity?

European,
Asian,
Maori,
Middle Eastern/Latin American/African,
Pacific Peoples,
Other (please specify)

What is your age?

Age 17 and under,
Age 18-30,
Age 31-45,
Age 46-60,
Age 61-75,
Age 76+

What are you currently doing? (You can choose more than one option)

Working full time (30 hours or more a week),
Working part time (Less than 30 hours a week),
Currently studying a bachelor's degree,
Currently studying a Postgraduate certificate or diploma,
Currently studying a Master's degree,
Currently studying a Doctoral degree,
Other (please specify)

How would you label yourself in terms of your cultural background?

Monocultural,
Bicultural,
Multicultural

Openness to Experience Scale (OP)

Read each statement and select the response that best describes you as you really are. There are no right or wrong answers. This measure investigates your openness to experience personality facets. This varies among individuals.

Intellectual

OPIntellectualQ1 Tasks that require a lot of thinking confuse me easily.

OPIntellectualQ2 I am a slow learner.

OPIntellectualQ3 I always have difficulty applying new concepts.

OPIntellectualQ4 I often need people to explain things to me.

OPIntellectualQ5 I am usually not very quick in my thinking but have strengths in other areas.

OPIntellectualQ6 I have to read complex information several times before I fully understand it.

OPIntellectualQ7 I need things explained to me only once.

OPIntellectualQ8 I am very quick at processing information.

OPIntellectualQ9 I grasp scientific theories easily.

Ingenuity

OPIngenuityQ10 I'm hopeless with inventing new things.

OPIngenuityQ11 I rarely take an idea and apply it in a new way.

OPIngenuityQ12 I avoid situations where I might have to come up with something new.

OPIngenuityQ13 Compared to other people I don't think I am very creative.

OPIngenuityQ14 I like coming up with imaginative plans.

OPIngenuityQ15 I improvise if I don't have the right tools for the job.

OPIngenuityQ16 I would rather have a job that involves creativity than one that doesn't.

OPIngenuityQ17 I can develop inventive ideas of high quality.

OPIngenuityQ18 People come to me if they are stuck with fresh ideas.

Curiosity

* OPCuriosityQ19 I don't like trying new things and would rather stick with what I know.

OPCuriosityQ20 I have no interest in learning new information.

* OPCuriosityQ21 I have never really been interested in science.

* OPCuriosityQ22 I seldom seek new opportunities to extend my knowledge.

OPCuriosityQ23 In a quiz I like to know what the answers are if I get the questions wrong.

OPCuriosityQ24 I like to analyse things instead of taking them at face value.

OPCuriosityQ25 I love to do experiments and see the results.

OPCuriosityQ26 I continually strive to uncover information about topics that are new to me.

OPCuriosityQ27 I try to learn something new every day.

Aesthetics
OPAestheticsQ28 I think viewing art is a waste of time.
OPAestheticsQ29 Art bores me.
OPAestheticsQ30 I don't find Classical Ballet interesting.
OPAestheticsQ31 I don't find literature especially interesting.
OPAestheticsQ32 I have a passion for art.
OPAestheticsQ33 I enjoy art exhibitions.
OPAestheticsQ34 I see the beauty in art when others do not.
OPAestheticsQ35 I have been touched emotionally by a great musical performance.
OPAestheticsQ36 If I see artwork I like in a gallery; I will visit it more than once to fully appreciate it.
Tolerance
OPToleranceQ37 Immigrants really irritate me.
OPToleranceQ38I think it is rude when others speak in a language I can't understand.
OPToleranceQ39 I prefer to visit countries where they speak my language.
* OPToleranceQ40 I like to hear different people's views on political issues.
* OPToleranceQ41 I understand that people can have different attitudes toward certain things that I do.
* OPToleranceQ42Like most people I am open to listening to what others have to say.
OPToleranceQ43 I enjoy experiencing the rituals associated with different religions.
OPToleranceQ44 I learn a great deal from people with differing beliefs.
OPToleranceQ45 I enjoy (racial) diversity in the community.
Depth
* OPDepthQ46 I believe in-depth discussions are a complete waste of time.
OPDepthQ47 I regard philosophy as a disease of the idle.
OPDepthQ48 Sometimes I avoid getting involved in philosophical discussions.
OPToleranceQ49 I am happiest when conversations are practical rather than philosophical.
* OPDepthQ50 I take the time to reflect on my thoughts and actions.
* OPDepthQ51 For me personal growth is more important than success.
OPDepthQ52 I am always interested in learning more about philosophy.
* OPDepthQ53 For me, there is nothing better than taking the time to think deeply about something.
* OPDepthQ54 I am fascinated by meditation and processes which encourage one to look inward.

Responses: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree

Note: Items with * dropped after factor analysis. Eleven of these items dropped because of insignificant and cross-loadings. Forty-three items retained with good reliabilities for broad factor scale and sub-scales.

Cultural Intelligence Scale (CQ)

Read each statement and select the response that best describes you as you really are. There are no right or wrong answers.

Metacognitive

CQMetacognitiveQ1 I am conscious of the cultural knowledge that I use when interacting with people with different cultural backgrounds.

CQMetacognitiveQ2 I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.

CQMetacognitiveQ3 I am conscious of the cultural knowledge I apply to cross-cultural interactions.

CQMetacognitiveQ4 I check the accuracy of my cultural knowledge I apply to cross-cultural interactions.

Cognitive

CQCognitiveQ5 I know the legal and economic systems of other cultures.

CQCognitiveQ6 I know the rules (e.g., vocabulary, grammar) of other languages.

CQCognitiveQ7 I know the cultural values and religious beliefs of other cultures.

CQCognitiveQ8 I know the marriage systems of other cultures.

CQCognitiveQ9 I know the arts and crafts of other cultures.

CQCognitiveQ10 I know the rules for expressing nonverbal behaviours in other cultures.

Motivational

CQMotivationalQ11 I enjoy interacting with people from different cultures.

CQMotivationalQ12 I am confident that I can socialize with locals in a culture that is unfamiliar to me.

CQMotivationalQ13 I am sure I can deal with the stresses of adjusting to a culture that is new to me.

CQMotivationalQ14 I enjoy living in cultures that are unfamiliar to me.

Behavioural

CQBehaviouralQ15 I am confident that I get accustomed to the shopping conditions in a different culture.

CQBehaviouralQ16 I change my verbal behaviour (e.g., accent, tone) when a cross-cultural interaction requires it.

CQBehaviouralQ17 I use pause and silence differently to suit different cross-cultural situations.

CQBehaviouralQ18 I vary the rate of my speaking when a cross-cultural situation requires it.

CQBehaviouralQ19 I change my nonverbal behaviour when a cross-cultural situation requires it.

CQBehaviouralQ20 I alter my facial expressions when a cross-cultural interaction requires it.

Responses: Strongly Disagree, Disagree, Slightly Disagree, Neutral, Slightly Agree, Agree, Strongly Agree

Note: Factor analysis retained all 20 items with good reliabilities for broad factor scale and sub-scales.

Innovative Work Behaviour Scale (IWB)

Read each statement and select the response that best describes your experience in your Current work place. If you are currently not working, select the response that describes what you would most likely do in your Future workplace.

(Internal Innovative Processes: Idea exploration and generation)

IWBQ1 I search out new working methods, techniques or instruments.

IWBQ2 I generate original solutions for problems.

IWBQ3 I find new approaches to execute tasks.

IWBQ4 I pay attention to issues that are not part of my daily work.

IWBQ5 I wonder how things can be improved.

(External Innovative Processes: Idea championing and implementation)

IWBQ6 I make important members in my organization enthusiastic for innovative ideas.

IWBQ7 I attempt to convince people to support an innovative idea.

IWBQ8 I systematically introduce innovative ideas into work practices.

IWBQ9 I contribute to the implementation of new ideas.

IWBQ10 I put effort into the development of new things.

Responses: Never, Rarely, Sometimes, Most of the Time, Always

Note: Factor analysis retained all ten items. Instead of four factors as proposed by De Jong and Den Hartog (2010), this study found two factors. Two-factored IWB prompts further research. For this study, it is assessed as a single construct as informed by Korzilius et al. (2017).

Marlowe-Crowne Social Desirability Scale (SD)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and honestly decide whether the statement is true or false as it pertains to you.

SDQ1 It is sometimes hard for me to go on with my work if I am not encouraged.

SDQ2 I sometimes feel resentful when I don't get my own way.

SDQ3 On a few occasions, I have given up doing something because I thought too little of my ability

SDQ4 There have been times when I felt like rebelling against people in authority even though I knew they were right.

SDQ5 No matter who I'm talking to, I'm always a good listener.

SDQ6 There have been occasions where I took advantage of someone.

SDQ7 I'm always willing to admit it when I make a mistake.

SDQ 8 I sometimes try to get even, rather than forgive and forget.

SDQ9 I am always courteous, even to people who are disagreeable.

SDQ10 I have never been irked when people expressed ideas very different from my own.

SDQ11 There have been times when I was quite jealous of the good fortune of others.

SDQ12 I am sometimes irritated by people who ask favours of me.

SDQ 13 I have never deliberately said something that hurt someone's feelings.

Responses: True, False

Note: Participants are not aware of the purpose of this scale, as its heading is titled "Personal Attitudes and Traits". This scale is used during preliminary analysis to filter positive responding styles in the data.

Appendix C: Pattern Matrix

Pattern Matrix of Openness to Experience Personality Trait after Items Dropped
(n = 398)

No.	Item	Factor 1 (Aesthetics)	Factor 2 (Intellectual)	Factor 3 (Ingenuity)	Factor 4 (Depth)	Factor 5 (Tolerance)	Factor 6 (Curiosity)
1	OPIntellectualQ1		.652				
2	OpIntellectualQ2		.727				
3	OPIntellectualQ3		.583				
4	OPIntellectualQ4		.668				
5	OPIntellectualQ5		.621				
6	OPIntellectualQ6		.618				
7	OPIntellectualQ7		.572				
8	OPIntellectualQ8		.629				
9	OPIntellectualQ9		.387				
10	OPIngenuityQ10			-.542			
11	OPIngenuityQ11			-.586			
12	OPIngenuityQ12			-.626			
13	OPIngenuityQ13			-.630			
14	OPIngenuityQ14			-.687			
15	OPIngenuityQ15			-.533			
16	OPIngenuityQ16			-.605			
17	OPIngenuityQ17			-.658			
18	OPIngenuityQ18			-.576			
19	OPCuriosityQ20						.448
20	OPCuriosityQ23						.361
21	OPCuriosityQ24						.531
22	OPCuriosityQ25						.435
23	OPCuriosityQ26						.524
24	OPCuriosityQ27						.494
25	OPAestheticsQ28	.798					
26	OPAestheticsQ29	.849					
27	OPAestheticsQ30	.489					
28	OPAestheticsQ31	.324					
29	OPAestheticsQ32	.764					
30	OPAestheticsQ33	.837					
31	OPAestheticsQ34	.793					
32	OPAestheticsQ35	.312					
33	OPAestheticsQ36	.638					
34	OPToleranceQ37					.610	
35	OPToleranceQ38					.431	
36	OPToleranceQ39					.417	
37	OPToleranceQ43					.377	
38	OPToleranceQ44					.422	
39	OPToleranceQ45					.664	
40	OPDepthQ47				.590		
41	OPDepthQ48				.760		
42	OPDepthQ49				.669		
43	OPDepthQ52				.700		

Note: Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 12 iterations.
KMO cut off level for individual items are set at .3. Values below .3 suppressed.
Eleven items dropped because of the insignificant and cross-loadings. Forty-three items retained.

Pattern Matrix of Cultural Intelligence (n = 398)

No.	Item	Factor 1 Motivational	Factor 2 Cognitive	Factor 3 Behavioural	Factor 4 Metacognitive
1	CQMetacognitiveQ1				-.736
2	CQMetacognitiveQ2				-.669
3	CQMetacognitiveQ3				-.766
4	CQMetacognitiveQ4				-.405
5	CQCognitiveQ5		.577		
6	CQCognitiveQ6		.600		
7	CQCognitiveQ7		.764		
8	CQCognitiveQ8		.795		
9	CQCognitiveQ9		.631		
10	CQCognitiveQ10		.618		
11	CQMotivationalQ11	.553			
12	CQMotivationalQ12	.732			
13	CQMotivationalQ13	.760			
14	CQMotivationalQ14	.762			
15	CQMotivationalQ15	.502			
16	CQBehaviouralQ16			-.626	
17	CQBehaviouralQ17			-.599	
18	CQBehaviouralQ18			-.685	
19	CQBehaviouralQ19			-.758	
20	CQBehaviouralQ20			-.754	

Note: Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 7 iterations.
KMO cut off level for individual items are set at .3. Values below .3 suppressed.
All 20 items retained.

Pattern Matrix of Innovative Work Behaviour (n = 398)

No.	Item	Factor 1 (Internal Innovative Processes: Idea exploration and generation)	Factor 2 (External Innovative Processes: Idea championing and implementation)
1	IWBQ1		.673
2	IWBQ2		.481
3	IWBQ3		.654
4	IWBQ4		.469
5	IWBQ5		.663
6	IWBQ6	.797	
7	IWBQ7	.653	
8	IWBQ8	.864	
9	IWBQ9	.784	
10	IWBQ10	.558	

Note: Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 8 iterations.
KMO cut off level for individual items are set at .3. Values below .3 suppressed.
All ten items retained.