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How the behavioural component of increased cultural intelligence affects task performance in international intercultural working groups

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ABSTRACT

In today's globally interlinked world, managers need to know how to get the most out of international intercultural teams. It is inevitable that in an international environment, individuals will be faced with cultural differences. How individuals deal with foreign culture situations and their ability to function in ambiguous environments relate to cultural intelligence (CQ). This study explored the effect that the behavioural component of cultural intelligence has on task performance in international intercultural working groups. The behavioural component focused on not only behavioural CQ, but also behavioural characteristics and national cultural dimensions as defined by Hofstede (1983).

A quantitative study was performed on 31 MBA students who partook in a consulting project in international intercultural groups consisting of South African, Chinese and American students. The groups' CQ were compared to results achieved in the project and it was found that neither increased CQ nor increased behavioural CQ had an effect on task performance. However, the behavioural characteristics of having set expectations in terms of team processes and shared goals, as well as the cultural dimensions of Power Distance (small), Short-term orientation, Indulgence and Masculinity attributed to increased task performance. Increased cultural dissimilarity, with specific relation to the dimension of Individualism, as well as communication difficulties relating to language barriers decreased task performance.

KEYWORDS

Cultural intelligence

National cultural dimensions

Task performance

International intercultural working groups

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DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

STUDENT DATE

JANITA HENNING

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1. INTRODUCTION TO THE RESEARCH PROBLEM

International cross-cultural group work is common practice in multinational enterprises, with the goal being to perform specific tasks. The composition of cross-cultural groups in terms of level of diversity, especially in relation to cultural dissimilarity, have been found to have a moderately positive motivational effect on teams (Guillaume, Knippenberg & Brodbeck, 2014). However, it may also be difficult for highly diverse groups to converge on common values (Meeussen, Schaafsma & Phalet, 2014). Based on this, it is assumed that the composition of international cross-cultural groups is important to ensure the successful completion of tasks.

It is inevitable that the world is becoming flat, as per Friedman (2005), thus the intention of this research is to understand how multinational enterprises can improve their working groups' task performance. There is continuous growth in international relations due to globalisation and networks facilitating international work, for example the opening of international markets, the ease of travel, and growing access via electronic platforms (Skype, Webbex, WeChat, etc.), which incentivises organisations to diversify cross-cultural interactions and associated group work via intercultural teams.

Due to the composition of international intercultural working groups, it is assumed that there will be cultural differences between group members. Cultural intelligence (QC) (Earley & Ang, 2003) relates to the ability to adapt to other cultural contexts, which plays an integral role in cross-cultural teams and associated group work. Jyoti and Kour (2015) argued that both individuals and managers with high CQs have increased task performance in cross-cultural environments, due to the fact that they are adaptable to both the general environment as well as people they are surrounded by.

Cultural intelligence has been classified by Earley and Ang (2003) into four facets, namely cognitive, metacognitive, motivational and behavioural. MacNab, Brislin and Worthley (2012) compared the cognitive (including metacognitive) to the 'head', being awareness, self-awareness and knowledge, whilst the motivational was compared to the 'heart', relating to goals, efficacy and persistence. Lastly, the authors compared the behavioural component to 'action' where a person is able to adjust or adapt to new learnings.

Earley and Ang (2003) defined CQ as an aggregate concept, i.e. the four facets together form CQ and all components need to be present. Yet Thomas et al. (2008) argued that

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CQ not only relates to skills and types of knowledge, but also knowledge and control over thinking and learning, which forms a system of interacting abilities. Their definition states that CQ is an interrelated construct comprised of knowledge, mindfulness and behavioural abilities. The main difference between the two definitions is that Earley and Ang believe the components of CQ can be separated, whilst Thomas et al. (2008) believe they cannot. However, both definitions overlap in terms of their components.

Furthermore, Earley and Ang (2003) identified the motivational component as the driver of CQ for effort and energy which translates into action. Thomas et al. (2012) differed by saying motivation is not necessarily a requirement, stating that willingness is different from the ability to act (Thomas et al., 2015). Both definitions do, however, place emphasis on individuals' actions.

In the context of task performance within a group setting, individuals have to do certain things in order to complete a task. Their actions or behaviour thus play arguably the most important role in the successful completion of a task, as the group needs to deliver a specific output. However, there needs to be an understanding of what and how it needs to be done as well as why it should be done. The understanding of the "what" and "how" can be compared to the cognitive / metacognitive component of QC (or knowledge and mindfulness), whilst the "why" is interpreted as the motivational component. It is generally accepted that both the cognitive and motivational components are necessary precedents of QC, but if it does not transpire into action, there is no point in having only understanding and motivation.

The behaviour and actions of individuals in a group are thus crucial to successful task performance. Behaviours of individuals are influenced by many factors, and in international cross-cultural groups it is assumed that national culture, as defined by Hofstede (1983), will play a significant role. Nationality is part of who we are, and as such we all have a "collective mental programming" (Hofstede, 1983, p.76) derived from how we have been brought up and how things are done where we come from. This cultural programming is very difficult to change and there are specific national cultural characteristics that can be generalised, regardless of differences within a nation.

Hofstede (1983; 1994; 2011) identified six classifications of cultural dimensions on a national level, including Power Distance, Uncertainty Avoidance, Individualism-Collectivism, Masculinity-Femininity, Long-term vs. Short-term, and Indulgence vs. Restraint. Each of these cultural dimensions have distinct characteristics which

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generally manifest within a nation, and these dimensions may thus be an indicator of how individuals will act and what values they will uphold.

The alignment of interests within the group (individual and group) is crucial (Zaal, Van Laar, Ståhl, Ellemers, & Derks, 2015), and when group members see others similar to how they see themselves, Polzer, Milton and Swarm (2002) found that creative task performance within groups is increased. Zaal et al. (2015) established that motivational foci (in their study they used regulatory focus theory relating to promotional and prevention motivational foci) affects how group members behave within a group – whether it is towards the group goals or personal interests. It can thus be argued that sources of motivation play an integral role in task performance in a group context.

Adair, Hideg and Spence (2013) advocated that a team's shared values play a significant role in effective functioning in culturally diverse settings. As it has been established that within a group context it is important how members associate themselves with each other, it is argued that with a focus on cultural classification on a national level, it is assumed that cultural dimensions within work groups could affect the behaviour of individuals, and as such, team effectiveness and associated task performance.

Furthermore, Adair et al. (2013) found that heightened CQ, especially in the behavioural and metacognitive components, has a positive effect on cross-cultural team shared values. Shared team values improve team performance, according to Kirkman and Shapiro, 2005 and Klein, Knight, Ziegert, Lim and Saltz (2011) in Adair et al. (2013, p.942).

Within international cross-cultural teams, it can thus be assumed that individuals from different nationalities may act differently and share different values because of their cultural conditioning (Hofstede, 2011). However, these differences may be overcome and newly created shared values can be developed should the individuals in a group setting have increased CQ (Adair et al., 2013), including specifically the behavioural component of CQ. As it is assumed that individuals with increased CQ will have improved task performance (Jyoti & Kour, 2015), it can be argued that individuals with increased behavioural CQ could have increased task performance in a working group, with the assumption that CQ's components can be clearly identified (Earley & Ang, 2003).

The aim of this research is to establish if increased CQ, with specific reference to behaviour, will increase task performance in international cross-cultural working groups. The focus is thus not only on the behavioural component of CQ, but also on the behaviour

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of individuals, or their perceived behaviour in a specific context. The behavioural component as defined by Earley and Ang (2003) (an individual component of the aggregate concept of CQ) and Thomas et al. (2008) is a necessary outcome of CQ, and will thus be incorporated into this research. International cross-cultural working groups are defined as groups consisting of individuals of more than one nationality, implying more than one national culture as per the definition of Hofstede (1983). The research will be conducted in the realm of task performance, which relates specifically to consulting project work in this study.

1.1. THE BUSINESS NEED FOR THIS STUDY

In intercultural management, it is very important to understand how to select and develop people to be able to work together towards a common goal, especially in complex and ambiguous environments. There is thus a need to understand how diversity in teams can be managed to achieve optimal effectiveness. The management contribution of this research is to assist with not only the structuring of international intercultural working groups to achieve successful task performance, but also how to select and develop individuals to be able to function in such groups. This is very valuable in both intercultural and organisational management.

1.2. THE THEORETICAL NEED FOR THIS STUDY

Ott and Michailova (2016, p.16) compiled an extensive summary of CQ literature, and stated that although research in the field is “leaving its adolescence”, there are many opportunities to study the construct in more depth. Three distinct avenues have been identified, including the construct itself, with specific relation to whether it is an aggregated or integrated construct, CQ antecedents and associated outcomes (the relationship thereof), and lastly contextual and individual differences that may affect CQ.

This research will address the gaps in the construct itself, as well as the contextual differences. It will address the gaps of the construct by studying the behavioural component of cultural intelligence in more depth to provide a better understanding of the component itself, but also how it relates to the aggregate CQ level. Furthermore, with the inclusion of behavioural attributes as defined and classified by Hofstede’s (1983; 2011) cultural dimensions, the context of how CQ manifests in a cross-cultural group

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setting will provide additional insights into cultural diversity and distance in relation to CQ. Cultural diversity and distance are defined according to the similarities and differences in terms of national cultures in this study.

A previous study performed by Cheng, Chua, Morris and Lee (2012) focused on the group composition of self-managing multicultural teams in light of Hofstede's (1983; 2011) cultural dimensions of Uncertainty Avoidance and Masculinity-Femininity (relational orientation). The study's main objective was to understand whether attributes associated with the cultural dimensions studied would assist with leadership and associated team performance in teams where there is no predefined hierarchical structure.

This study will thus build on the work of Cheng et al. (2012) by taking into account similarities and differences within a group context on a national cultural level, and understanding the effect thereof on task performance via the lens of CQ. This will set the scene to understand how cultural dimensions affect the construct, which adds to the theory of cross-cultural group composition.

The research of Ott and Michailova (2016) only focused on CQ on an individual level and not on a group or organisational level; minimal research has been performed to date on CQ on a group level (teams) (Adair et al., 2013). It must be noted that Earley and Ang (2003) specifically stated that the construct will have to be adapted and redefined to measure CQ on a group level, due to the nature of the construct. However, this research does not intend to measure group CQ, but rather the individuals within groups' CQ, and relate their behavioural attributes to task performance. Based on this, it is not deemed necessary to adapt the definition of CQ for the purposes of this research.

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2. LITERATURE REVIEW

The theory and literature review will focus on the key components of the proposed study, which includes CQ, human behaviour (with specific mention of Hofstede's (1983; 2011) cultural dimensions), task performance and international intercultural working groups.

2.1. CULTURAL INTELLIGENCE

Cultural intelligence is seen as a component of intercultural management, and relates to the ability to adapt to other cultural contexts; CQ was originally defined by Earley and Ang (2003). Brislin, Worthley and MacNab (2006) described CQ as being able to adapt and thrive in a different environment than individuals have been socialised in, whilst Thomas (2006) posed that CQ allows people to effectively interact with others who are culturally different. In essence, individuals are able to create new interpretations and behaviours in cultural situations where their learned cues and behaviours are not fitting (Ott & Michailova, 2016). There is thus an expectation that there will inevitably be misunderstandings, but that individuals with high CQ will be able to delay their own judgment of situations in order to obtain an understanding of a specific situation (Brislin et al., 2006).

CQ is defined as an aggregate construct consisting of three main components: cognitive (including metacognitive), motivational and behavioural (Earley & Mosakowski, 2004). The cognitive component is distinctively divided (Earley & Ang, 2003) into cognitive and metacognitive components, forming the foundation of the four-factor model (Ang & Van Dyne, 2008). Thomas et al. (2008) postulated that CQ is a system of interacting knowledge and skills driven by metacognition, which enables people to not only adapt to their environment, but to select and shape cultural aspects.

The reason why Thomas et al. (2008) explored the concept of CQ further, was because the early research of Earley and Ang (2003) stated that individuals must have all the components to achieve CQ, but it was not specified how the various components interact (Ott & Michailova, 2016). Thomas et al. (2008) thus introduced the concept of CQ being an interrelated construct with knowledge, mindfulness and behavioural abilities. Furthermore, they conceptualised CQ as consisting of two types of intelligence (as opposed to intercultural competency which was originally assumed by Earley and Ang (2003)), namely knowledge and skills, and intelligent behaviour. Intelligent behaviour

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refers to appropriate behaviour based on attained knowledge and skills. The emphasis is on focusing on similarities across different cultures as opposed to highlighting differences.

CQ is in addition to other forms of intelligence, for example IQ, Emotional Intelligence (EQ) and Social Intelligence (Van Dyne et al., 2012). As norms and social interactions change from one culture to another, an individual with a high EQ or Social Intelligence in a specific culture may not be able to display the same level of intelligence in a different cultural environment. CQ is thus seen as being an intelligence that is not cultural-specific and can be applied in cross-cultural environments (Ng & Earley, 2006).

Significant research has since been done on the construct of CQ itself, as well as its antecedents and outcomes (Ott & Michailova, 2016). The multidimensional CQ framework was based on Sternberg and Determan's (1986, in Van Dyne et al., 2012, p.297) multiple loci of intelligence with the same four components, who specifically described it as:

1. metacognition and cognition are the mental capabilities of an individual driving cognitive functioning;
2. motivation is also considered as a mental capability, but focuses on the cognitive processes of drive and choice; and
3. behavioural intelligence is opposed to the mental competencies of an individual and includes the behavioural capability of an individual with specific relation to verbal and non-verbal actions.

Using the multiple loci of intelligence framework of Sternberg and Determan (1986), Earley and Ang (2003) and Ang and Van Dyne (2008) defined CQ according to the following components:

1. Metacognitive CQ is the mental capability referring to awareness and monitoring and thus obtaining cultural knowledge and evaluating it. This is thus the cultural consciousness and awareness of cultural cues (Bücker, Furrer & Lin, 2015) when interacting with people from different cultural backgrounds. Cultural assumptions are constantly reviewed and questioned via a process of cultural knowledge development when interacting with different cultures (Ang & Van Dyne, 2008).
2. Cognitive CQ is general knowledge about cultures and cultural differences, including norms, practices and conventions. This is normally acquired through either experiences or education (Ang & Van Dyne, 2008).

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3. Motivational CQ is the mental capacity to be able to function in intercultural situations and includes conscious cognition, as well as the ability to direct attention and energy towards learning about and functioning in these types of situations (Ang et al., 2007). Ng and Earley (2006) established a correlation in relation to high motivational CQ and high levels of self-efficacy, alluding to the fact that individuals with high motivational CQ believe that they will be able to function in ambiguous cultural environments.
4. Behavioural CQ refers to the ability to adapt behaviours based on varying cultural contests – this is the conversion of knowledge to action. It is in essence how individuals translate their knowledge into culturally appropriate language, tonal usage, facial expressions and other gestures (Ang et al., 2007).

Van Dyne et al. (2012) further expanded the basic four components into 11 sub-components, forming the Expanded Cultural Intelligence Scale (E-CQS). Metacognition is described as being able to plan or strategize before cultural encounters, having an awareness of oneself and others, and "checking" (Van Dyne et al., 2012, p.298), which refers to constant reviewing and adapting assumptions and mental maps based on actual experiences. Cognition is split into cultural-general and context-specific knowledge, with the former relating to the understanding of general elements (observable, visible or psychological features) that characterise a culture (e.g. cultural dimensions as defined by Hofstede (1983; 2011) on a national level). The latter refers to knowledge of a specific situation or cultural context, which could relate to a subculture as well. Context-specific knowledge is also referred to as "insider understanding" (Van Dyne et al., 2012, p.302).

Motivational CQ was further classified by Van Dyne et al. (2012) into intrinsic interest, i.e. experiencing culturally diverse situations as satisfying and being self-generated, thus not dependent on external factors. Extrinsic interest refers to the benefit obtained from increased intercultural interactions, which can be employed in different situations to leverage and improve oneself. Lastly, self-efficacy to adjust relates to task-specific confidence, i.e. being able to deal with the associated stress of adjustment to different cultures, but also having the confidence to interact.

Behavioural CQ was categorised as verbal and non-verbal behaviour, as well as speech acts, by Van Dyne et al. (2012). This refers to vocalisation (tone, speed and volume of speaking, verbal behaviour), body language, facial expressions and gestures (non-verbal behaviour). Speech acts refer to communication, specifically how messages are being conveyed to other cultures, including the style of communication, what and when to say specific things, but also the actual words being used. High behavioural CQ allows

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individuals to overcome reliance on habits and have increased behavioural flexibility, depending on the situation the individual finds him/herself in.

The sub classification of the four main components defined by Earley and Ang (2003) assists with an understanding of the relevant attributes, as well as the capabilities of individuals functioning on a higher level of CQ.

Thomas (2006), with his model of knowledge, mindfulness and behaviour, separated knowledge into content knowledge and process knowledge. Content knowledge assists with cultural mapping based on expected behaviour because of individual cultural values and norms. The author further advocated that one of the sources of reference to be used for cultural mapping is the dimensioning of cultural variation proposed by Hofstede (1983; 2011). Mindfulness is when hypothesised cultural behaviour is translated to appropriate behaviour in different situations. Furthermore, Thomas (2006) stressed that behaviour is not an unconscious mimicry of expected actions, but needs to be based on cultural knowledge and expectations as well as own interpretation of specific situations. This is a constant development loop, based on previously acquired knowledge and the execution thereof.

Thomas (2006) acknowledged and emphasised that a major component of CQ is the behavioural component, which needs to be included in associated assessments. The behavioural component refers to the ability to adjust based on situations and expectations in cross-cultural environments, when knowledge in itself is not sufficient.

Bücker, Furrer and Lin (2015) built on the measurement of CQ via a replication study and further factor analysis, and argued that the scale could better presented via two dimensions, namely internalised cultural knowledge (ICK) and effective cultural flexibility (ECF). ICK is a combination of metacognitive and cognitive capabilities, whilst ECF relates to motivational and behavioural dimensions which are classified as self-conscious adjustment with an action-oriented nature.

Although the leading research to date on CQ differs in relation to the main components and the driving factors of the intelligence, it can be assumed that the behaviour component is critical to the outcomes thereof. Researchers to date have all acknowledged this fact and emphasised its importance.

In a team context, knowledge sharing plays a very important role in the performance of specifically cross-cultural teams. Chen and Lin (2013) found that high cultural intelligence facilitates knowledge sharing, with metacognitive CQ being the most

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influential factor. In addition to this, they further found that culturally diverse teams also have increased innovative knowledge sharing when they are able to overcome miscommunications and conflicts. Perceived team efficacy is critical, i.e. the belief that the team is capable of performing set tasks, including knowledge sharing.

MacNab et al. (2012) conducted an experiential study to develop CQ training models based on contact theory, arguing that complexity and challenges associated with cross-cultural interactions increase with the intensity of contact. Intensity of contact includes the duration of interactions and the associated risks involved with these interactions. Contact theory relates to how intergroup contact influences feelings and behaviours in cross-cultural groups, and which conditions need to be met in order for the group to benefit. Although contentious, the conditions include equal status/positioning, mutual goals or shared needs/wants, personal contact and support of the contact by authority (authority can be recognised administration, leaders or other influential people involved with the parties). The study of MacNab et al. (2012) found that experiential learning based on contact theory has a positive effect on CQ.

A further experiential study was performed by Rosenblatt, Worthley and MacNab (2013) on the same principles, but was also linked to expectancy disconfirmation, which refers to experiencing a different behaviour or response than originally expected. It is argued that expectancy disconfirmation contributes to increasing cultural intelligence via associated learnings. The findings were based on optimal cross-cultural contact, using similar conditions to the study of MacNab et al. (2012).

The studies of MacNab et al. (2012) and Rosenblatt et al. (2013) created a platform for cultural learning, not only via the experiential model, but based on contact under certain conditions. This also highlights the fact that cultural intelligence development is an ongoing process and cultural intelligence in individuals can change over time, which may have an effect on task performance.

CQ, as opposed to emotional or social intelligence, prepares individuals to have a heightened disconfirmation expectancy (Brislin et al., 2006) where judgement is suspended. Furthermore, Brislin et al. (2006, p.49) postulated that there is a general acceptance of confusion and being uncomfortable with “not knowing,” which in turn reduces stress levels during intercultural interactions. To a certain extent, individuals need to be able to depersonalise themselves from the situation in order to move forward, however they need to have a desire to be able to understand in order to become more

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effective (Brislin et al., 2006). It is important to note that adaptation based on recognition can also be in the form of compromise.

Cultural intelligence is integral to this research, as it forms the lens of analysis. By understanding the level of cultural intelligence within a group (namely the CQ of the individuals in the group), the effect of cultural dimensions on task performance can be analysed. One of the major components of cultural intelligence, namely 'behavioural' will be an indicator of actions performed within the group, specifically relating to task performance.

2.2. CULTURAL BEHAVIOUR

It is believed that CQ is developed from knowledge of various cultural contexts (Earley & Ang 2003) and associated experiences with other cultural orientations (Thomas et al., 2008). Individual differences play an important role in CQ and it has been found that certain values can predict specific CQ components, e.g. conscientiousness predicts metacognitive CQ, agreeableness predicts behavioural CQ, whilst extraversion predicts motivational, behavioural and cognitive CQ (Ang et al., 2007). Brislin, Worthley and MacNab (2006) advocated that awareness of cultural differences can be obtained by linking cultural themes, e.g. Hofstede's (1983; 2011) cultural dimensions, to specific cultural behaviours.

Hofstede's (1983) cultural dimension classification has been used for almost four decades as a model to understand national cultures, which influence intercultural management in various areas, for example work-related values. Culture, according to Hofstede (1983, p.76), relates to the "collective mental programming" of a group (whether it is a nation, region, social class, occupation or other type of group with members) being shared via common conditioning. Culture is difficult to change, and if it does, it is normally over a prolonged period. The consequence of this is that within intercultural management, managers need to find ways to facilitate amicable working environments to be able to achieve results in situations where cultures may differ significantly, as there is not always the option of change. Should there be an opportunity or ability to change, however, managers also need to be able to identify and exploit this.

Hofstede (1983) originally classified national cultures according to four dimensions, including Power Distance, Uncertainty Avoidance, Individualism-Collectivism and Masculinity-Femininity. These four dimensions were later supplemented with two

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additional dimensions, namely Long-term vs. Short-term and Indulgence vs. Restraint (Hofstede, 2011) after further analysis had been done on Asian cultures. Although there has been widespread criticism of Hofstede's model, including the methodology and sample selection used (Fernandez, Carlson, Stepina & Nicholson, 1997), the model has withstood the test of time and is still commonly used in intercultural studies.

The cultural dimension of Power Distance refers to small Power Distance vs. large Power Distance, with reference to the unequal distribution of power (Hofstede, 2011). In countries with a small Power Distance, it is accepted that power should be legitimate, education revolves around the students, and it is expected to consult with subordinates. This is different to large Power Distance countries, where power is part of one's existence and the legitimacy thereof is irrelevant, education revolves around teachers, and it is expected that subordinates receive instruction.

Uncertainty Avoidance relates to a country's acceptance of ambiguity – this could refer to unstructured situations (Hofstede, 2011), for example. Where a country has strong Uncertainty Avoidance, unstructured situations will be avoided and formal structures (e.g. legislation) will be put in place to try and avoid this. Countries with weak Uncertainty Avoidance accept uncertainty as normal, have less stress and anxiety, have a curiosity about what is different, are tolerant of different ideas and people, and normally do not like rules. Countries with a strong Uncertainty Avoidance feel threatened by uncertainty and tend to fight it, have higher stress, anxiety and neuroticism, and are more emotional. What is different is considered dangerous - including persons or ideas, and there is an inherent need to have rules.

Individualism-Collectivism relates to a societal characteristic that refers to how people are integrated into groups (Hofstede, 2011). In individualist countries, people are expected to look after themselves, they are "'I'-conscious" (Hofstede, 2011, p.11), they focus on their right to privacy, they find it good to speak their minds, a personal opinion is expected, and tasks are seen as more important than relationships. By contrast, collectivist countries believe people should be looking after each other in strong, cohesive groups with unconditional loyalty, they are "'we'-conscious" (Hofstede, 2011, p.11), they prefer harmony as opposed to speaking one's mind, opinions are predetermined by the group, and relationships are more important than tasks.

Masculinity-Femininity is a cultural dimension defined by Hofstede (2004), which is ascribed to dominant values relating to assertiveness, the acquisition of money and things, emphasis on performance and the fact that you live in order to work. The cultural

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dimension of Masculinity refers to the social role divisions between men and women in a nation (Hofstede, 1983). According to this dimension, there is a clear distinction between the traditional roles of men and women in societies, with a clear role division between masculine and feminine. From this, men are assumed to be more assertive and dominant, as opposed to women being caring and service-oriented.

According to Hofstede (1983), the values of Masculinity or Femininity are attributed to a nation as a whole, regardless of gender. As such, a nation with a high masculine value will display traits including assertiveness, achieving something visible, making money, stress on achievement, competition and decisiveness, as opposed to feminine nations which have a prevalence towards relationships and people, being modest, quality of life, helping others and intuition (Hofstede, 1983; 1994; 2011). It is interesting to note that the nation's value orientation varies less amongst women in societies as opposed to men (Hofstede, 1994).

In a study performed by Cheng et al. (2012), it was found that a relational orientation (femininity) contributes positively to team effectiveness in self-managing multicultural teams. However, this study was of a longitudinal nature and assessed task performance over an extended period of time. Due to the nature of the tasks performed in this research and the focus being on short-term gains, it is argued that a more goal-oriented or masculine approach may be more effective in task performance.

The cultural dimension of Long-term vs. Short-term orientation originated from a study on the Chinese culture with a focus on Confucianism (Hofstede, 2011). Characteristics of Long-term orientation include perseverance, thrift, the importance of relationships linked to status, the assumption that important events will happen in the future, people adapting to circumstances, learning from other countries, and students believing that success or failure is due to effort. This is opposed to short-termism, i.e. the reciprocating of social obligations and respect for tradition, protecting oneself, being personally steady and stable, important events are either happening now or have already happened, people are the same in all circumstances, one is proud of one's own country, and students believe success or failure is due to luck.

When it comes to Indulgence vs. Restraint (Hofstede, 2011), Indulgence relates to the encouragement of gratification of desires and needs, enjoying life and having fun, "perception of personal life control" (Hofstede, 2011, p.16), freedom of speech, as well as leisure being important. Restraint refers to the control of gratification of needs via regulation in the form of strict social norms, perception of helplessness ("what happens

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to me is not my own doing" (Hofstede, 2011, p.16)) and neither freedom of speech or leisure is important.

Upon analysis of the various attributes classified by Hofstede (1983; 2011) in the six cultural dimensions, it can be debated that some common attributes from the different cultural dimensions may encourage task performance in the light of the attributes associated with the dimension. Nationalities with a high level of Masculinity are assumed to be task-oriented (because there is an emphasis on performance and work), and societies will express qualities of assertiveness to ensure specific goals are reached, whilst with an individualistic orientated nation, speaking one's mind and tasks are more important than relationships. This is opposed to collectivism, where there is an importance attached to group work and Long-term orientation (perseverance, success or failure is due to effort). Other attributes may deter task performance, e.g. strong Power Distance, where one is not expected to consult with subordinates (this may negatively affect group work, which in turn will have an impact on task performance); strong Uncertainty Avoidance, where there may be increased stress and anxiety; and individualism, which may cause personal goals to be more important than the group's goals. If a nation has a higher score for Indulgence, fun and enjoyment may be a priority and compulsory tasks may be procrastinated.

Based on the above, it is clear that some attributes of the cultural dimensions are overlapping (e.g. Masculinity: emphasis on work and Individualism: tasks are more important than relationships), but also contradictory in the light of task performance (e.g. individuality: personal goals are more important than the group's goals).

By understanding the cultural backgrounds of individuals their behaviours may be easier to interpret, for example in a collectivist culture, the in-group plays a more important role than group memberships do in individualistic cultures (Brislin et al., 2012).

2.2.1. NATIONAL CULTURAL ATTRIBUTES OF CROSS-CULTURAL WORKING GROUPS

The composition of the cross-cultural working groups under study included South Africa, China and the United States, with the following cultural dimension values:

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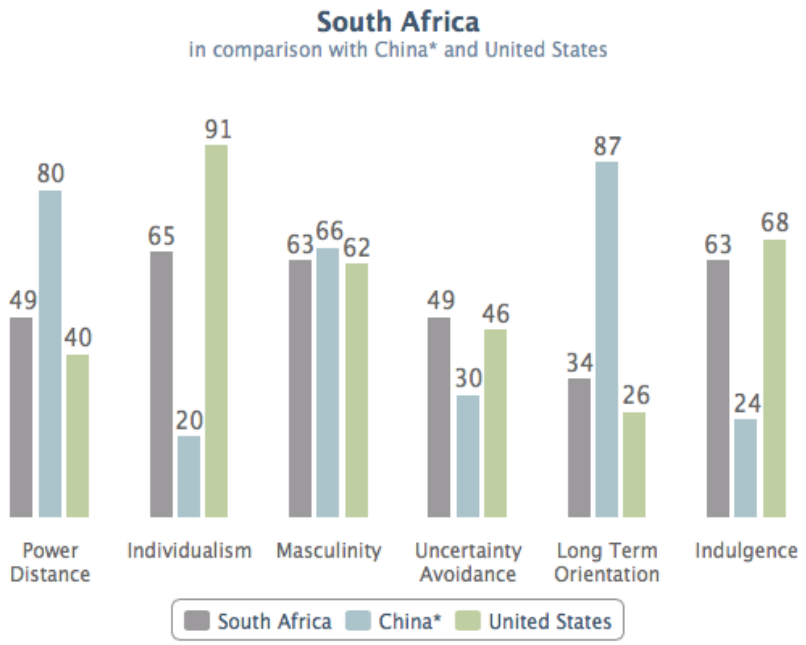
Figure 2.1: Working groups' value comparison based on Hofstede's cultural dimensions



Source: The Hofstede Centre. (n.d.)

As is apparent in the above diagram, there are major value differences in relation to specific dimensions across the countries, i.e. Power Distance, Individualism, Long-term orientation and Indulgence. The two dimensions where the three countries' values are the most similar are Masculinity (more masculine than feminine) and Uncertainty Avoidance (weak). On certain dimensions, South Africa and the United States score similarly, namely Power Distance (acceptance towards hierarchy is less rigid than China), Long-term orientation (more focused on quick results than China) and Indulgence (more willing to realise their impulses than China). The biggest differences between the countries are with Individualism, where the United States is not interdependent on society and look after themselves and immediate family only, as opposed to more collectivist societies.

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2.3. INTERNATIONAL CROSS-CULTURAL WORKING GROUPS

Group work or team work, which are considered to be synonymous with each other (Zoltan, Bordeianu & Vancea, 2013), play a very important role in business environments, as they are seen as a solution to organisational issues such as productivity. People are the common factor in all organisations, and according to Zoltan et al. (2013), one of the most common techniques to perform tasks in an organisation is via the division into groups. A group's main characteristics include having a number of members, communication with each other via interaction, influence on group members (the influence that group members have on each other), the objective to achieve common goals or activities, psychosocial structure (however minimal) and certain aggregate attributes because of the individual characteristics of the members (Zoltan et al., 2013).

In this research, working groups and associated group work are defined as formal structures consisting of a number of members with different characteristics, with the common goal being to complete pre-defined tasks. The composition of working groups will be international of nature and thus defined as cross-cultural (or intercultural).

Components that positively affect group work include Team Psychological Safety (Edmondson, 1999), which refers to the concept that team members feel safe to express opinions or behaviour in a team context. This facilitates the platform for team information exchange, which refers to giving and receiving information in a team context.

Gong, Kim, Lee and Zhu (2013) found a positive relationship between team information exchange, team learning and performance approach goals. Team learning and performance approach goals relate to the shared understanding of the emphasis that is placed on learning and achieving results in the form of either evaluations or in competition with other teams. Maltarich, Greenwald and Reilly (2016) further found that team-level goal orientation is a state as opposed to a trait, and that team members' traits can influence the team goal's state. This implies that goal orientation in a group context needs to be achieved by members in the form of aggregate behaviour, and is not solely attributable to individual characteristics.

As per Zaal et al. (2015), when individual and group interests are not aligned, this will cause individuals to rather focus on their individual goals as opposed to group goals under circumstances of promotion (where there is a need for growth and accomplishment). In prevention focus (there is a need for safety and security as failure is perceived more negatively than success is viewed positively), individuals strive for

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group goals as opposed to their own individual goals. It is thus argued that cross-cultural composition and interactions affect goal orientation, as well as group congruence.

According to Dollwet and Reichard (2014), competencies that facilitate successful cross-cultural interactions can be measured via cross-cultural psychological capital, including the aspects of self-efficacy, hope, optimism and resilience. These aspects in combination affect performance in cross-cultural situations, with cross-cultural performance being higher when cross-cultural psychological capital is higher. Furthermore, it has been proven that cross-cultural psychological capital positively relates to CQ.

Dollwet and Reichard (2014) defined cross-cultural self-efficacy as the individual's conviction of being able to interact successfully with different cultures, whilst cross-cultural hope refers to being able to pursue the goal of working successfully with different cultures, including generating alternative ways to reach this goal if any barriers are encountered. MacNab and Worthley (2012) furthermore argued that self-efficacy is an antecedent to CQ.

Cross-cultural optimism (Dollwet & Reichard, 2014) includes how events are interpreted – optimists will expect the best outcomes and have positive outlooks relating to interactions with people from different cultures. The ability to adapt and recover from events, whether positive or negative, relates to cross-cultural resilience. However, resiliency relates to more than just being able to recover from situations, as it also enables learning by facilitating the process of understanding of difficulties experienced via previous encounters.

Previous research, specifically on intercultural group work, relates to the different roles being played by members in group work, i.e. the dominance of a certain nationality or gender when members are part of an international group (Cotton, George & Joyner, 2013). It is expected that global teams may have numerous perspectives because of their heterogeneous composition, but these types of teams may also be vulnerable to process losses, which relates to team members not being willing to contribute their unique knowledge (Janssens & Brett, 2006). A model of creative realism was accordingly proposed by Janssens and Brett, where process losses are minimised and creatively realistic decisions are made in a group situation.

Janssens and Brett (2006) proposed a fusion model of collaboration in the CQ space with specific reference to teams – the general idea is built on respecting cultural differences by recognising them and combining the differences in such a way that the

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uniqueness of the different qualities are highlighted. This overcomes the "common knowledge effect" or "collective information sharing bias" ((Gigone & Hastie, 1993; Wittenbaum, Hubbel & Zuckerman, 1999) in Janssens and Brett, 2006, p.129), where similar ideas as opposed to divergent ideas are often shared. Following the knowledge sharing component in a group context, decisions often need to be made, which can be affected by self- or sub-group interests, or by unequal power.

It is assumed that cultural principles for teamwork will inadvertently interfere with both information extraction and decision making (Janssens & Brett, 2006). In collective cultures, team members may not voice their own ideas if they differ from the group's, which is similar to team members with cultures where hierarchy plays an important role, as they may not want to differ from higher status members. Furthermore, collective cultures may want to review all ideas with team members before decisions are made, as opposed to individualist cultures who are comfortable selling ideas. Janssens and Brett proposed that cultures, although dominant in specific dimensions, may still have experience of opposing dimensions, for example individualist cultures would still have had the experience of collectivism in the form of family. The purpose of acknowledging this is to include the understanding of the context of the team environment, as dominant cultures can be influenced by a situation.

One of the unequal power relations identified in a team context is language (Janssens & Brett, 2006), specifically where a common language is selected for team communication that is not the native language of some team members. The risk of this is that team members who are fluent in the common language may dominate discussions, and other members may be prevented from expressing their opinions. This could thus be detrimental to team performance.

Sub-groups could be employed to mitigate this risk by creating cohorts for similar perspectives, which in turn could ensure unique views are incorporated in group decisions as it may be easier to advocate ideas as a group as opposed to as an individual (Janssens & Brett, 2006). The risk of sub-groups is, however, that team members who identify more with the team may have more influence than individuals who are less able to identify – this is so-called social ostracism.

This fusion process proposed by Janssens and Brett (2006) can be followed by substituting certain cultural principles, introducing new principles, or combining existing principles. Dialogue is thus critical to identify compatibilities. Janssens and Brett (2006) differed from Adair, Hideg and Spence (2013) regarding creating shared values, as they

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believe it is not necessary to have trade-offs based on activity values, but rather proposed respect and tolerance of differences and literally taking the best of both worlds and agreeing people will do things differently and accepting it as is. It is however stressed that there needs to be meaningful participation in order to ensure the effectiveness of this model.

2.4. TASK PERFORMANCE

In the context of this research, task performance is defined as a clearly identifiable task to be performed within a group context, which can be either formally structured (via instruction received from an authoritative figure) or informally structured (an agreement amongst group members). However, there must be a definite common goal achievable via the performance of the task.

Task performance can be effected via numerous external and internal factors. Klep, Wisse and van der Flier (2011) advocated that the group mood (more than the emotions) can have positive or negative effects on either creative or analytical tasks, whilst Rao (2015) argued that trust increases task performance, especially in high risk situations. Leadership and associated team inclusion and satisfaction (Aritz & Walker, 2014), as well as personality, team-related dynamics and the sharing of the same goal (Amanjee & Carmichael, 2013) also influence task performance in a group situation.

Jyoti and Kour (2015) advocated that task performance directly impacts organisational performance and effectiveness. In their study they found that higher cultural intelligence enhances task performance, as responsibilities can be better understood and performed. They also found that higher cultural intelligence assists with cultural adjustment in a management environment, i.e. managers with higher cultural intelligence are able to adapt to varying cultural environments easier. Due to the reduced stress associated with adjustment, managers have increased confidence in their abilities, which thus increases performance.

Nouri, Erez, Rockstuhl, Ang, Leshem-Calif and Rafaeli (2013) found that in culturally diverse teams, situational strength plays a very big role, i.e. high or low task specificity. It is argued that high task specificity (strong situation) increases task performance in convergent tasks as there will be similar interpretations and a shared understanding of what needs to be done, whilst low task specificity (weak situation) increases task performance in more creative tasks as cultures interpret and respond to the requirements

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based on their own values and norms. Task processes were thus identified by Nouri et al. (2013) as critical for task performance in culturally diverse teams.

In this research it was assumed that there was high task specificity, as the study focused on a specific predefined task performed by respondents. It was thus expected that the situational factor would increase task performances even further.

Shin, Kim, Choi and Lee (2015) argued that in task performance, a specific type of team culture is advantageous. This culture, they postulated, relates to internal processes (clear role expectations and predictability of processes), human relations (teamwork is valued) and rational goals (focus on results). It was found that team values, including teamwork, efficiency and control, increases the collective motivation to fulfil task requirements. However, the rational goal team culture did not have a significant impact on motivation in teams and rather favoured individual goals.

It is proposed that task performance in the form of the effect of cultural intelligence, situational strength and team culture will be affected by the focus on task performance. CQ and situational strength are considered to be environmental factors, as the level of CQ will be the lens of analysis and it is assumed that there is strong task specificity with regards to situational strength.

It has previously been established that task-specific self-efficacy is an antecedent to CQ (Ott & Michailova, 2016). This relates to confidence in being able to perform a specific task. Chen, Lyn and Sawangpattanakul (2011) and Lee et al. (2013) found that CQ increases job performance and cross-cultural effectiveness. Individual components of CQ, e.g. metacognitive and behavioural CQ, are also predictors of task performance (Ang et al., 2007) and influence contextual performance in the form of non-technical responsibilities (Malek & Budhwar, 2013). Yet research conducted on specific relationships stresses the fact that adjustment plays a critical role in performance.

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3. RESEARCH QUESTIONS

From the literature review it was established that additional research is required on the Cultural Intelligence construct itself as well as how the construct manifests contextually. The leading literature relating to the major components under study posed numerous potential research questions, however due to the nature of this report, the research only focused on one main research question:

In intercultural management, does the behavioural component of increased cultural intelligence affect task performance within international cross-cultural working groups?

The research question thus addresses the construct of cultural intelligence by investigating the behavioural component thereof, namely behavioural CQ, but also contextualizing how the construct manifests within international cross-cultural working groups. The purpose is to understand if increased cultural intelligence will increase task performance in the specific context. Furthermore the research question will also explore how human behaviour is exhibited and the effect thereof in the context.

Human behaviour in relation to international cross-cultural working groups is classified on a national level based on cultural values, but also individual characteristics that are presented by respondents.

The research question was examined via hypothesis analysis, after which an additional descriptive analysis was performed to obtain a better understanding of the associated findings. The descriptive analysis focused on the behavioural component of cultural intelligence, as well as behavioural characteristics based on individual responses and national cultural values.

3.1. HYPOTHESIS 1

The null hypothesis states that increased cultural intelligence will not have increased task performance in international cross-cultural working groups.

The alternative hypothesis states that increased cultural intelligence will have increased task performance in international cross-cultural working groups.

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4. RESEARCH METHODOLOGY

4.1. METHODOLOGY USED

PHILOSOPY

This research focuses on the effect of increased cultural intelligence (CQ), specifically in relation to the behavioural component on task performance in international cross-cultural workgroups, with the group members being social actors. In this phenomenon, the social actors' behaviours have been interpreted based on the relevant data and findings. A research philosophy of interpretivism has thus been followed, which relates to "the study of social phenomena in their natural environment" (Saunders & Lewis, 2012, p.106).

APPROACH

Saunders and Lewis (2012) identified two types of research approaches: deduction and induction. Deduction relates to an approach of testing existing theoretical propositions, as opposed to induction where multiple theories, observations or measurements of patterns or occurrences of a phenomena are used to provide context to formulate hypotheses to be investigated.

In this research, a combination of seemingly interlinked theories has been used with an emphasis on the context – both the participants and the environment - in order to infer hypotheses to be tested. This thus relates to an inductive approach which has been followed.

RESEARCH DESIGN

The research design, as the "overall umbrella" (Saunders & Lewis, 2012, p.102) for the detailed research strategies, can be classified according to three main purposes:

1. Exploratory studies: the purpose of exploratory research is to learn new information in fields that have been understudied. Usually data will be gathered and analysed via qualitative measures, which could be used as the basis for future, more detailed descriptive studies.
2. Descriptive studies: in descriptive studies, the situation is being described and often quantified via the collection of data in the form of questionnaires. Data can be gathered and analysed via either qualitative or quantitative measures or a mix

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thereof. This type of research also includes hypothesis testing via statistical measures.

3. Explanatory studies: the focus of explanatory studies is causal relationships – this often follows descriptive studies. In these types of studies, the relationship between a dependent and independent variable is examined to provide an explanation on why a phenomenon exists.

In this study, it is advocated that sufficient exploratory studies have been performed on key concepts including CQ, cultural dimensions, task performance and international intercultural group work. This is evidenced by the fact that the concept of CQ has been used in mainstream research for over 13 years (Ott & Michailova, 2016), and cultural dimensions relating to behaviour, e.g. Hofstede's (1983; 2011) cultural dimensions, have been part of critically acclaimed literature since 1980. Furthermore, research has also been done on task performance in the light of CQ (Ang et al.,2007; Jyoti & Kour, 2015), albeit on an individual level.

Although initial insights were obtained from leading academic literature, new understandings were explored from the data obtained and analysed, with specific reference to working groups. This study has thus followed a descriptive approach. The importance of the study is to describe the behaviour of the respondents in the form of the effect of increased CQ on task performance.

RESEARCH STRATEGY

A survey method was followed for this research paper, which is suitable for both exploratory and descriptive research (Saunders & Lewis, 2012). A large amount of data about the same things could thus be collected from a group of people for analysis. The research consists of structured data collected in the form of questionnaires with a focus on closed-ended questions, but supplemented by open-ended questions (see questionnaire used in 8.1).

The questionnaire focused specifically on a task performed by the respondents to limit ambiguity. This is a similar approach to that followed by MacNab and Worthley (2012), where parameters were provided to respondents in relation to the specific task that they had to use to complete the questionnaire for their CQ research. This helped respondents focus on a single point in the project, which was in line with the cross-sectional nature of the research.

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Furthermore, it was necessary to focus the sample selection's attention on a specific event, as the respondents had been involved in two prior projects as well, which could have affected their responses.

RESEARCH METHOD

Quantitative research relates to the examination of the relationship amongst measurable variables (Creswell, 2013), which can be analysed via statistical procedures. The main data collection method was quantitative in the form of closed-ended questions, which were completed by respondents in the form of a written questionnaire. Although open-ended questions were included in the questionnaire, these questions were combined to form a central response list and then analysed quantitatively. As a single research method was used for the study, it is considered a mono-method (Saunders & Lewis, 2012).

According to the summary of CQ research to date by Ott and Michailova (2016), the majority of the studies have been quantitative in nature. A few research papers have completed studies based on qualitative measures, but because of the theoretical concepts maturing, empirical as opposed to conceptual research has been considered more appropriate.

TIME HORIZON

Data from participants were collected at only one period in time, i.e. a 'snapshot' (Saunders & Lewis, 2012) were taken via data collection from a diverse group of participants (different cultures, demographics and experience). The data were collected via a single set of written questionnaires completed by the respondents. It has to be noted that all respondents did not return the questionnaires at the same time, but that all responses related to a specific point in time. Respondents were provided the opportunity to complete the questionnaires at their own leisure and return same to the researcher upon completion.

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4.2. DESCRIPTION OF THE DATA

4.2.1. POPULATION

The population of the study included international cross-cultural teams from cultures that have an assumed higher cultural intelligence, performing tasks via group work. For the purpose of this study, no distinction was made between the types of teams (working groups), i.e. whether they were in a working or a study environment, as it was assumed that the dynamics would be similar due to the constructs under study, namely CQ and associated cultural behavioural components and successful task performance. The type of tasks to be performed were in the realm of consulting projects.

4.2.2. UNIT OF ANALYSIS

The unit of analysis in this study was the behaviour of international cross-cultural team members. The study focused on the team members to understand the effect of increased CQ on task performance, as well as how the behavioural component thereof affects task performance in a group work situation.

4.2.3. SAMPLING METHOD AND SIZE

Student sampling was used by Bücker et al. (2015), but specifically students with extensive international exposure in the form of education abroad, as it has been found that this type of experience has a significant impact on all four components of CQ (Crowne, 2013). The sample used in the current study, was based on the same principle as MBA students were specifically selected for CQS testing, because of their international exposure.

Bücker et al. (2015) stressed the importance of the characteristics of the sample, specifically in relation to research on CQ, as it is considered moot if the intelligence of respondents is measured without taking their relevant exposure into account. Bücker et al. (2015) argued that sufficient foreign experience is a necessity in the sample selection, because respondents need to understand the milieu according to Huang, Curran, Keeney, Poposki and DeShon (2012), which would also assist with accurate responses (Koo Moon, Kwon Choi & Shik Jung, 2012). In this study, a similar approach was followed as a sample was selected based on the characteristics of the proposed respondents.

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Bücker et al. (2015) used a sample selection consisting of only one country, namely Chinese respondents. They recommended that further studies should be performed to compare the results across multiple countries. Based on this premise, the researcher's sample selection was selected based on the characteristics of the respondents' foreign experience as well as their nationalities.

Non-probability sampling was used in the study on a purposive sampling basis (Saunders & Lewis, 2012). This form of sampling was used based on the researcher's judgement, with specific relation to required characteristics for the proposed respondents. The specific sampling technique was deemed necessary due to the nature of the population, which had very specific characteristics. The sample selection refers to specifically identified individuals who are part of international cross-cultural working groups, performing tasks in an environment where the performance thereof can be measured.

The sample consisted of 32 MBA students participating in the Global Trilateral MBA programme, which is the brainchild of Howard University, based in Washington DC in the United States. The programme is a collaboration between the Gordon Institute of Business Science in South Africa (GIBS), Howard University (HU) and the Central University of Finance and Economics in China (CUFE), which provides the opportunity to students selected from each of the countries to work on live international consulting projects in international cross-cultural groups. The programme consists of a series of formalised tasks (consulting projects) to be performed by students in pre-allocated cross-cultural groups and permission was obtained from the faculty involved in the GTMBA programme for the proposed study.

The students were allocated to five independent groups, with each having the same instructions and guidelines to perform predefined formal outputs in an assigned consulting project with a specific scope. The consulting projects each focused on a specific client from an array of industries. The allocation of students from the three Universities to the five groups were performed by the relevant faculty involved on a random basis. Due to students who were unable to partake in the project, the group composition was not completely equal in terms of the number of students per group as well as the number of students per nationality per group. However, each group consisted of at least one member of each nationality (South African, Chinese and American).

The sample selection was deemed as being appropriate for the proposed study due to the fact that structured task performance is required in the form of group work during the

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GTMBA, with pre-defined goals and a formal evaluation process. Furthermore, as the students had been allocated to the cross-cultural groups, with an equal balance of nationalities in each group, it was considered a representative sample in relation to international cross-cultural working groups. The combination of nationalities in the groups also increased diversity in the sample selection.

Although the GTMBA programme consists of a series of consulting projects performed over a period of time (three projects in total, i.e. one project in each of the countries), the proposed research focused only on one project, namely the second consulting project that is hosted in China. The allocated groups each worked on a separate client, and results were based on the formal evaluation by faculty on the project proposal, final report and presentation of findings.

The process of self-selection in the completion of the questionnaire, as per Bücker et al. (2015), where students were able to complete the questionnaires voluntarily and being able to withdraw without penalty. The overall response rate was very high at 97%, with only one questionnaire out of the 32 not being received back. However, only the first section of one questionnaire was completed and four additional questionnaires had to be removed for the CQ testing as insufficient questions had been completed by the associated respondents. The response rate for the CQ testing was thus 84%. The group composition as analysed in Chapter 5, is thus based on actual responses received and not the original group composition as allocated by faculty.

In measuring CQ and the effects thereof, Bücker et al. (2015) postulated that motivation is critical; in their study they assumed that if respondents spent time completing the questionnaire fully and accurately, it could be assumed that the more motivated respondents completed the survey. Inefficient effort responding was thus not expected (Huang et al., 2012) from the questionnaires received back.

As is highlighted in the limitations of this research, the group cultural intelligence is dependent on individual respondents' scores. Since a total of five questionnaires could not be used for the cultural intelligence calculation per group, there is a risk that the group cultural intelligence scores used for the comparison to group results may be distorted.

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The groups affected by non-responses were:

Table 4.1: Missing / incomplete questionnaires per group

GROUP	NUMBER OF MISSING / INCOMPLETE QUESTIONNAIRES	% OF TOTAL ALLOCATED RESPONDENTS PER GROUP
Group 1	0	0%
Group 2	1	14%
Group 3	1	17%
Group 4	3	38%
Group 5	0	0%
TOTAL	**5**	**16%**

Groups 1 and 5 thus had a perfect response rate with Groups 2 and 3 having an immaterial percentage of non-responses. Group 4 had the most non-responses at 38% (three out of a total of eight responses were either incomplete or not received back). The fact that Group 4 had a high non-response rate, the associated possible effect on the group cultural intelligence score was therefore taken into account in both the analysis and discussion of results.

The response rate for the behavioural component of this study was however considered as being appropriate (97% with only one questionnaire being incomplete or not received back). All demographic analyses were however based on the decreased sample size of 27 respondents to be in line with the principle research question of this study relating to cultural intelligence.

4.2.4. MEASUREMENT INSTRUMENT

Quantitative data through custom-compiled, structured questionnaires were collected. The questionnaire included questions based on concepts in the literature review on seemingly interconnected theories, to establish whether they were indeed linked.

The questionnaire contained the following sections:

- Responses relating to perceived individual behaviour within a cross-cultural international working group in relation to the specific consulting project (task).
- Responses relating to perceived group behaviour within a cross-cultural international working group in relation to the specific consulting project (task).
- Demographic details.
- Cultural intelligence questions.

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Sections 1 to 3 were customised based on the literature review performed by the researcher. For Section 4 (cultural intelligence), an existing 20 questions were used that were compiled by The Cultural Intelligence Centre, LLC, registered in the USA. Permission was granted by the institution to use the specific questionnaire (see Appendix B). The Cultural Intelligence Centre focuses on rigorous academic research in the field, assisting large organisations and renowned publications.

The cultural intelligence questionnaire was based on the four-factor CQ model (cognitive, metacognitive, motivational and behavioural), as originally classified by Earley and Ang (2003).

The questions in the data collection tool were analysed in combination with actual group results as formally provided by faculty. Permission was obtained from GIBS' Academic Programme Director as well as the University of Pretoria to use the results of the five GTMBA teams as evaluated by the GIBS faculty. This formed the component of successful task performance, with the assumption that a higher mark meant that a group was more successful.

A 7-point Likert-type scale was used for the CQS as well as additional behavioural questions, ranging from 1 (strongly disagree) to 7 (strongly agree). The behavioural questions included specific questions relating to national cultures.

Demographic details were collected, as well as additional information that was descriptively analysed, e.g. international travel experience, work experience and management experience, as per a study by MacNab and Worthley (2012). Further details obtained related to the respondents' gender, age, education, number of countries visited, management experience, etc.

4.2.5. DATA GATHERING PROCESS

The data gathering process was focused on obtaining information directly from the respondents. This was done by collecting specific data in the form of structured questions via printed questionnaires completed by the participants. Data were collected via structured quantitative questionnaires that were completed during a facilitated session when all the respondents were available together.

The data types that were collected included ranked (answers in the form of a Likert-based scale) and numerical data as either continuous or discreet (e.g. age of

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respondents, number of countries visited, number of years' working experience etc.). This facilitated quantitative analysis, but due to the sampling method used, statistical tests were limited.

Preventative measures to reduce the risk of common method bias was taken in designing the questionnaire (Conway & Lance, 2010), including requesting the respondents to complete the questionnaires anonymously.

The first section of questions relating to behavioural components were custom designed by the researcher based on leading research, including behavioural characteristics, motivational factors and cultural dimensions as defined by Hofstede (1983; 2011). The questions were supplemented with literature findings relating to international cross-cultural group work and task performance. A matrix mapping the relevant theory based on the literature review to the questions in the questionnaire was drawn up to ensure consistency.

Written permission was obtained from the Cultural Intelligence Centre based in Michigan to use their most recent CQS (four-factor model) as validated by Van Dyne and Ang (2008). Permission was granted by Lynne van Dynne to use the CQS for academic research purposes. The Cultural Centre offers additional services of online analysis of CQS, but the researcher opted to analyse the data objectively.

CQ via the four-factor model (cognition, metacognition, motivation, behaviour) was generally measured by the Cultural Intelligence Scale (CQS), consisting of 20 Likert-scale based questions linked to each of the CQ components (Van Dyne et al., 2012). The CQS has been extensively tested to confirm its reliability, validity and generalizability (Ang & Van Dyne, 2008). Even though it is a self-reported scale, previous research comparing the results of self-reported tests (self-rated) as opposed to observer-reported (peer-rated) tests are consistent (Shannon & Begley, 2008), thus it could be assumed that the self-reported test had predictive validity.

Critique of the usage of the CQS include the samples used for testing and the statistical discriminant validity of the four CQ dimensions (Bücker et al., 2015). Bücker et al. advocated that the samples used for previous CQS measurements did not have sufficient foreign experience and discriminant validity was not sufficiently tested. Via a replication study, taking into account these items, they found that the four constructs could be grouped into two broad categories as opposed to the original four categories. However, an associated empirical test has not yet been developed to measure CQ based on these findings. This is similar to MacNab and Worthley's (2012) research, when they used the

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Earley and Ang (2003) approach due to the established model being sound and having related measuring instruments.

It is generally accepted that the CQS is used, with some researchers only selecting specific questions, depending on the method of measurement used (aggregate vs. certain components), e.g. Firth, Chen, Kirkman, & Kim (2014). Bücker et al. (2015) acknowledged the model employed by Thomas et al. (2008), but used the standard CQS test (Ang et al., 2007) as it had been used intensively for a longer period. Some researchers modified the CQS slightly, for example by taking out certain questions (MacNab & Worthley 2012). A short-form cultural intelligence test (SFCQ) was also developed by Thomas et al. (2015) after an initial more complex questionnaire was introduced, however very little validation of the scale has been done due to the newness thereof.

Researchers have both tested and used CQS on an aggregate level of the four constructs (Engle & Nehrt, 2012), thus adding the scores of each of the components to determine overall CQ, but also only certain components have been used, e.g. MacNab et al. (2012) used only three components of CQ. Ott and Michailova (2016) argued that depending on the conceptualisation of CQ used, the construct should be accordingly addressed, i.e. if Earley and Ang's (2003) four factor model is used, the individual components can be either used in isolation or in aggregate, whilst when using the model of Thomas et al. (2008), the construct should not be separated.

4.2.6. ANALYSIS APPROACH

The collected data were quantitatively analysed to understand the effect of CQ on task performance via quantitative statistical methods including inferential and descriptive statistics.

4.3. LIMITATIONS

Limitations to the research include the sample selection used – there is limited opportunity to extrapolate the results due to the non-probability selection method of the sample. The sample size of 31 respondents is a further limitation, as it is considered a relatively small sample size. The fact that the sample selection consists of only MBA

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students may skew the results, due to the assumption that MBA students in their study environment will have an increased focus on task performance, due to nature of the programme they are enrolled in.

The cultural intelligence test that was completed by the participants is self-rating, thus an accurate cultural intelligence level may not be obtained due to self-bias. Furthermore, group cultural intelligence was calculated by aggregating individual respondents' cultural intelligence on a group level and as five respondents have not returned or completed the cultural intelligence test section, it is possible that group cultural intelligence may be incorrectly stated. This could accordingly affect the analysis of the group cultural intelligence in comparison to results achieved per group.

Lastly, the way in which the data were collected may have affected the actual data gathered, as it was collected via a facilitated session by faculty involved in the programme. Although this may have ensured that the majority of participants partook in the survey, the results may be distorted as the participants may have felt obliged to answer questions as a result of the specific situation.

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5. RESULTS

The results are presented in two main sections including cultural intelligence and behavioural analysis. In combination, these two sections answer the research question as set out in Chapter 3: **In intercultural management, does the behavioural component of increased cultural intelligence affect task performance within international cross-cultural working groups?**

Due to the effect demographic characteristics have on both group and individual behaviour and the role it plays as an antecedent in cultural intelligence, the demographics of the sample selection have been analysed to understand the groups' composition. The group composition was analysed based on the decreased sample size of 27 respondents (see 4.2.3). Furthermore the groups itself have been studied in depth to understand the individual respondents' cultural intelligence which make up the group cultural intelligence. Additional behavioural analysis was performed on a group level in relation to national cultural dimensions as well as behavioural characteristics and prominences. Behavioural analysis was performed on all 31 respondents as all required sections have been answered by the respondents in question.

5.1. CULTURAL INTELLIGENCE

5.1.1. GROUP COMPOSITION

The group composition of each of the five groups were considered international and cross-cultural, as each of the groups had a representation of at least 33% of each of the nationalities (South African, Chinese and American), except for Group 3 that contained a fourth nationality (Zimbabwe), and Group 4 which had only a 17% American representation. The respondent with the Zimbabwean nationality formed part of the South African cohort and resides in South Africa. It is however acknowledged that the respondent's national cultural values may differ from the South African values, due to cultural programming as defined by Hofstede (1983).

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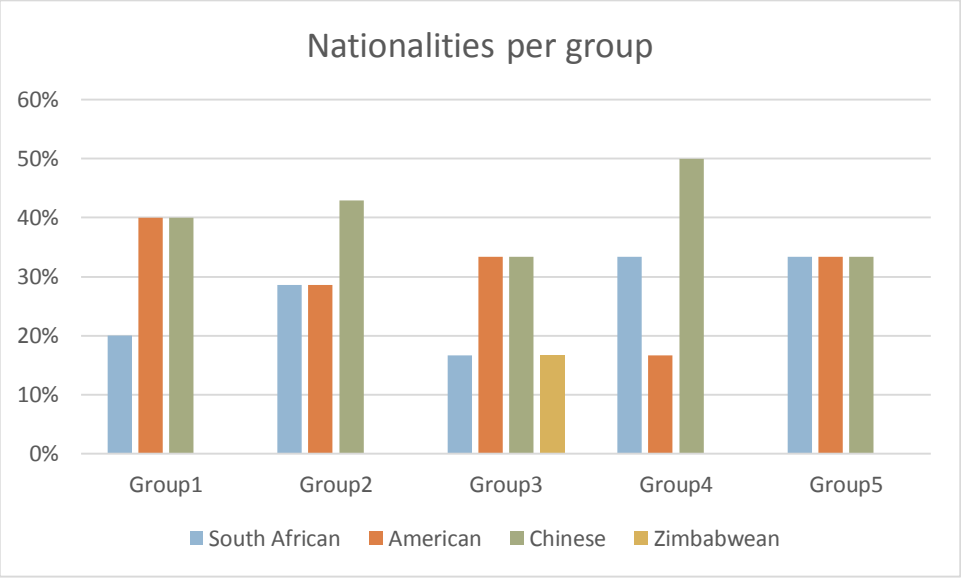
Figure 5.1: Nationalities per group



The majority (45%) of the respondents were between 26-30 years old, whilst 34% were aged 31-35 years. Almost half (47%) had 6-10 years' working experience, while 30% had 1-5 years' of working experience. An overwhelming 73% of the respondents were female.

Due to the nature of the construct and previous research, it was important to understand foreign (especially in relation to nationalities) experience or exposure to strengthen the CQ findings. Foreign exposure was measured in terms of number of countries and continents travelled to, as well as competency in terms of languages. Of the respondents, 87% had travelled to more than two foreign countries, whilst 23% had travelled to more than 10 countries. Furthermore, 30% had travelled to more than three continents. The sample's language diversity was centred on the ability to speak two languages (57%), and 23% could speak three or more languages. As in the study performed by Bücker et al. (2015), the respondents in the sample had sufficient ability to answer the self-reported CQS, as it assumed they would understand the intricacies involved in the subject matter (Huang et al., 2012) based on their foreign exposure.

As the groups were analysed in-depth both on a CQ level and a behavioural component level, the factors that could affect group composition and dynamics were analysed and summarised as per the frequency tables below.

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Table 5.1: Demographics of respondents per group

DEMOGRAPHICS

	RESPON-DENTS PER GROUP	SEX			AGE				
GROUP	**Total**	**Female**	**Male**	**No answer**	**20-25**	**26-30**	**31-35**	**>35**	**No answer**
Group 1	5	2	3		2	1	1	1	
Group 2	6	6				4	2		
Group 3	5	4	1			3	2		
Group 4	5	4	1			1	3	1	
Group 5	6	4	1	1		3	1	1	1

Group 2 was the only group that consisted only of females. Groups 1, 4 and 5 contained respondents older than 35 years of age. Group 1 was the only group with respondents younger than 26 years of age.

Table 5.2: Work and management experience of respondents per group

WORK & MANAGEMENT EXPERIENCE

	WORK EXPERIENCE (NUMBER OF YEARS)				YEARS IN MANAGEMENT
GROUP	**1-5**	**6-10**	**11-15**	**>15**	**Total**
Group 1	2	2	1		21
Group 2		5	1		12
Group 3	2	1	2		18
Group 4		4		1	6
Group 5	3	2		1	29

The respondents in Groups 2 and 4 had more than five years' work experience. Groups 4 and 5 each had one respondent with more than 15 years' work experience. Group 5 had the highest aggregate management experience (in years), followed by Group 1. Group 4's respondents had the least amount of work experience.

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Table 5.3: Foreign exposure of respondents per group

FOREIGN EXPOSURE

	NUMBER OF CONTINENTS TRAVELLED TO				NUMBER OF COUNTRIES TRAVELLED TO				NUMBER OF LANGUAGES SPOKEN			
GROUP	**1**	**2**	**3**	**>3**	**1**	**2-5**	**6-10**	**>10**	**1**	**2**	**3**	**>3**
Group 1		2	1	2		2	2	1	1	3		1
Group 2		2	2	2		2	2	2	1	2	3	
Group 3		3		2		3	1	1	1	4		
Group 4	2		1	2	2		3		1	3		1
Group 5		2	3	1		2	1	3	1	3	2	

All the groups except Group 5 had at least two respondents who had travelled to more than three different continents. Group 5 followed by Group 2 had the most respondents who had travelled to more than 10 countries. Only Group 4 contained respondents who had only travelled to one country. Groups 1 and 2 each had one respondent who were able to speak more than three languages. Group 2 followed by Group 5 had the most respondents who could speak three languages. The majority of respondents in Group 3 could speak two languages. Each group had one respondent who could only speak one language.

The various components representing separate dimensions in relation to how the questionnaire was mapped were separately analysed for further statistical purposes. This included the cultural intelligence test, individual ratings and group ratings questions based on perceived behaviour. All statistical tests were performed with a significance level of 0.05.

5.1.2. GROUP CULTURAL INTELLIGENCE

Cultural intelligence was calculated based on the aggregated concept of the construct, thus the scores of the individual components (cognitive, metacognitive, motivational and behavioural) were quantified and aggregated based on the Likert-scale questionnaire responses by taking Strongly Disagree as value “1” and Strongly agree as value “7”. The aggregated CQ as calculated will be referred to as “Total CQ” in this research paper, whilst the component CQ will be referred to as either “cognitive CQ”, “metacognitive CQ”, “motivational CQ” or “behavioural CQ”. Where the groups’ CQ was calculated, the Total CQ per individual was aggregated on a group level, and the same has been done with the individual CQ components for comparative purposes.

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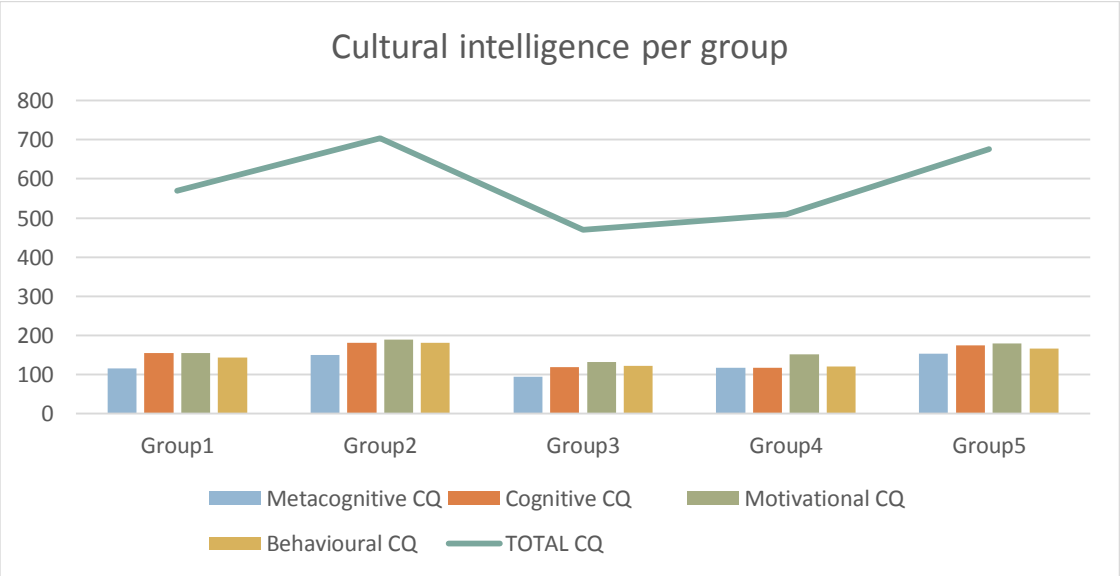
Where there were no answers completed, it was assumed that respondents were not familiar with the specific situation described in the question on what they had to rate themselves, thus it was assumed the respondents will have no CQ on the specific component and the value was thus substituted by "0". Five respondents did not complete the CQ test section of the questionnaire, thus their responses were excluded from this part of analysis, as it was assumed it would distort the average cultural intelligence scores per group. As per Adair et al. (2013), individual CQ scores affect the Total CQ of the group, thus the average CQ per group could not be used to replace individual non-responses. The respondents for this section were thus limited to 27.

To establish the reliability of the data for the results of the cultural intelligence test, a Cronbach's alpha test was run with a value of 0.912. This is considered acceptable as it is greater than 0.7 (Bland & Altman, 1997), and it was not deemed necessary to ignore any of the questions in the sample. As per the study performed by Adair et al. (2013), Cronbach's alpha per component was also run, being 0.832 for metacognitive CQ, 0.906 for cognitive CQ, 0.790 for motivational CQ and 0.727 for behavioural CQ.

Due to the tested reliability and validity of the questionnaire and the fact that the questionnaire only consisted of 20 questions focusing on four distinctive constructs, it was not necessary to reduce variables via factor analysis. Statistical tests run on the CQ component were thus based on the 20 questions.

The total CQ per respondent was accordingly grouped per component and per working group as follows:

Figure 5.2: Cultural intelligence per group



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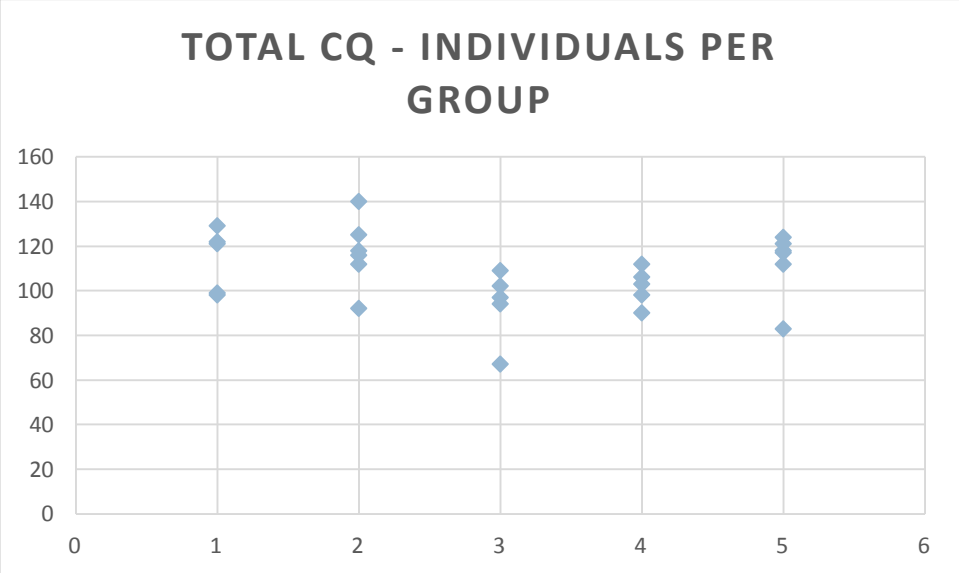
At face value it seemed as though the different groups' CQ differed, both on Total CQ as well as on an individual component level, with Group 2 having the highest Total CQ. Furthermore, Group 2 also had the highest cognitive CQ, motivational CQ and behavioural CQ, with Groups 3 and 4 having overall the lowest scores on both a Total CQ and component level.

5.1.3. CQ OF INDIVIDUALS PER GROUP

As it was noted that cultural intelligence, as defined by Earley and Ang (2003), is an individual construct and not a group construct, the individual respondents were further analysed to understand whether specific individuals' CQ could have influenced their group's total CQ. This was done by identifying any significant outliers.

As indicated in the figure below, the CQ of the majority of the respondents per group were clustered with a few outliers, especially in Groups 2, 3 and 5. The CQ of the respondents in Group 4 were the most similar – this was already indicated in the group's lower standard deviation of the mean Total CQ.

Figure 5.3: Comparison of individual Total CQ per group



Group 1 had three respondents with a much higher mean total CQ (Respondents 1, 2 and 3: 124) than the bottom two respondents (Respondents 4 and 5: 99). The biggest

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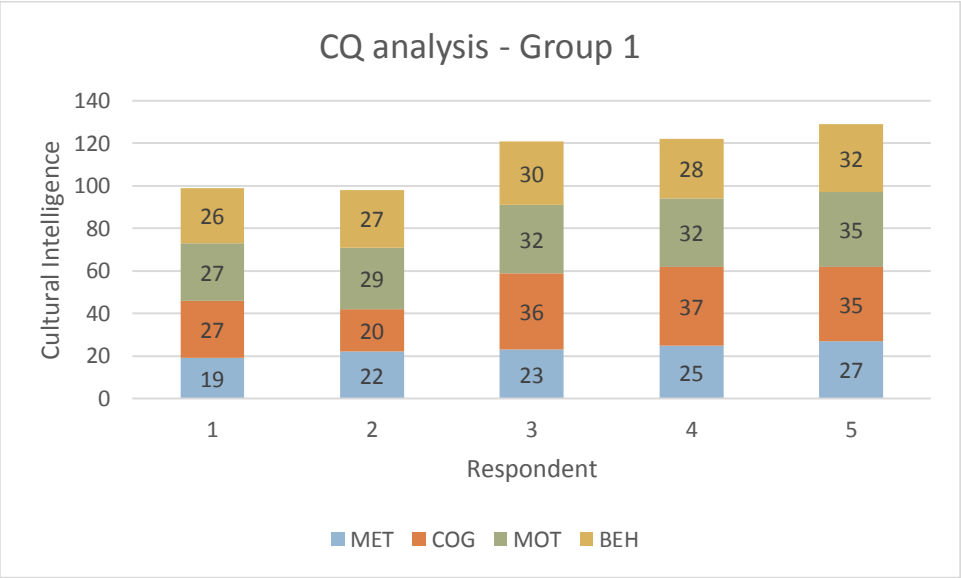
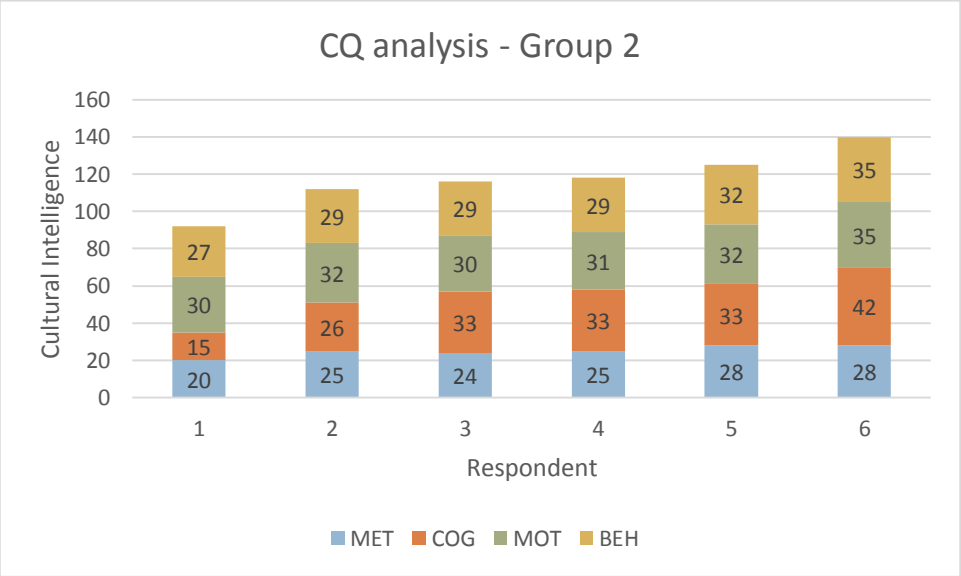
difference per respondent related to cognitive CQ (difference of 17 between Respondent 2 and Respondent 5).

Figure 5.4: Individual respondents' CQ analysis of Group 1



Group 2 had the biggest difference per respondent on Total CQ of 48 (Respondent 6: and Respondent 1: 92), with three respondents clustered around a mean of 115 (Respondents 3, 4 and 5). The biggest difference on a component level (27) was also on cognitive CQ (Respondent 6: 42 and Respondent 1: 15).

Figure 5.5: Individual respondents' CQ analysis of Group 2



Group 3 had one respondent with a very low Total CQ (Respondent 5: 67), whilst the other four respondents had a mean Total CQ of 101. The differences were very high on

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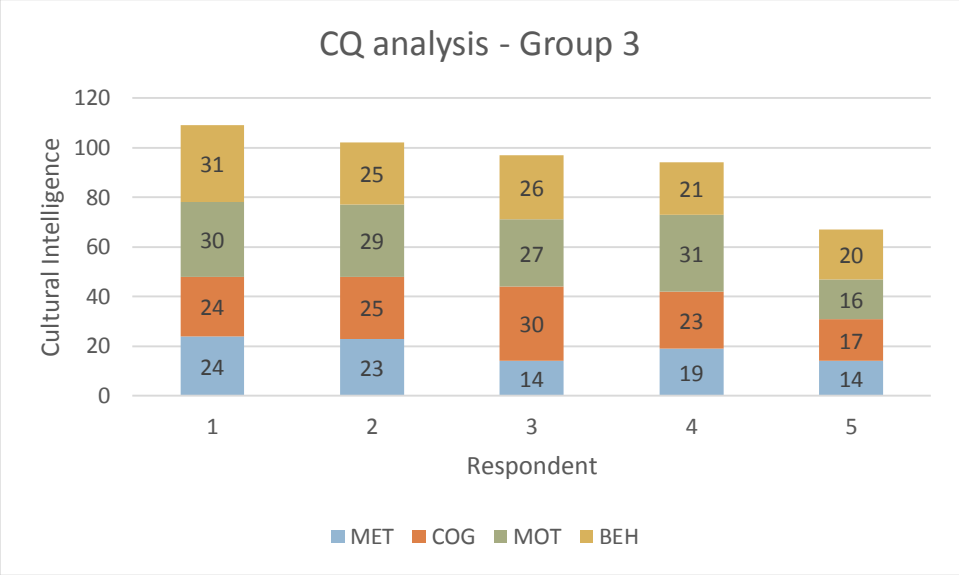
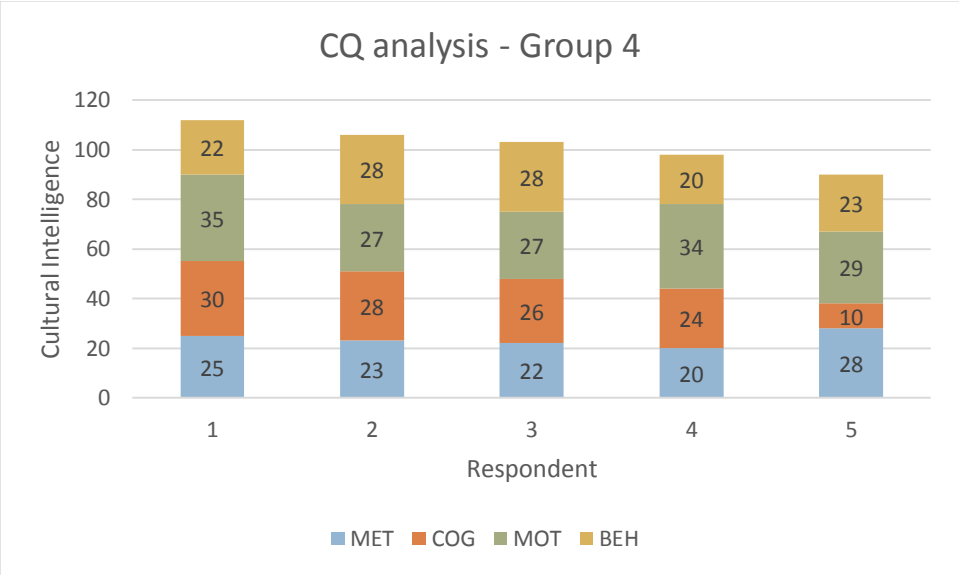
all the components, ranging from 10 on metacognitive CQ (Respondent 1: 24 and Respondent 3: 14), 11 on behavioural CQ (Respondent 5: 20 and Respondent 1: 31), 13 on cognitive CQ (Respondent 3: 30 and Respondent 5: 17) and 15 (Respondent 4: 31 and Respondent 5: 16) on motivational CQ.

Figure 5.6: Individual respondents' CQ analysis of Group 3



Group 4 had the least dispersed Total CQ values with a maximum difference of 22 (Respondent 1: 112 and Respondent 5: 90). The biggest difference was on cognitive CQ 20 (Respondent 1: 30 and Respondent 5: 10).

Figure 5.7: Individual respondents' CQ analysis of Group 4



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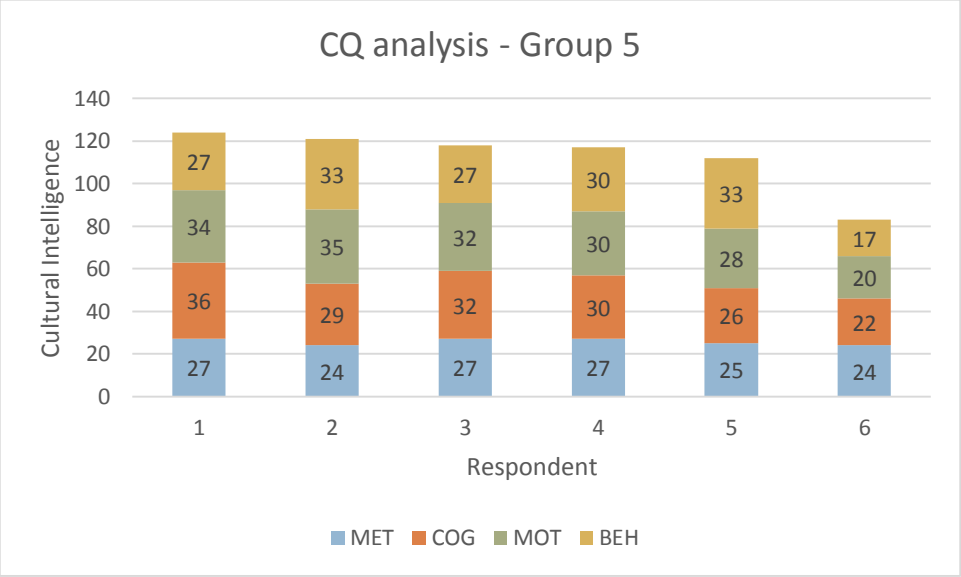
Group 5 also had one respondent with a relatively low Total CQ (83) in comparison with the other respondents, clustered around two groups with means of 116 (Respondents 3 and 4) and 123 (Respondents 1 and 2). The biggest difference on Total CQ was 41 (Respondent 1: 124 and Respondent 5: 83), which related to three components: cognitive (14) (Respondent 1: 36 and Respondent 6: 22), motivational (15) (Respondent 2: 35 and Respondent 6: 20) and behavioural (16) (Respondent 2: 33 vs. Respondent 6: 17).

Figure 5.8: Individual respondents' CQ analysis of Group 5



Based on the analysis on a group level, it was apparent that there were observable differences between the individuals' cognitive CQ in all groups. Furthermore, there were also notable differences on behavioural CQ and motivational CQ in two groups (Group 3 and Group 5) and metacognitive CQ differences in Group 3. Group 2 had the biggest difference in Total CQ per individual respondent, while Group 4 had the smallest difference in Total CQ per individual respondent.

5.1.4. CQ IN COMPARISON TO RESULTS

To obtain a high level picture of the CQ rankings per group in comparison to the results obtained, the groups were ranked according to their relevant component CQ, Total CQ and results. The CQ values used were based on the aggregate scores on a group level. The ranking was done in descending order, thus "1" was the group with the highest score

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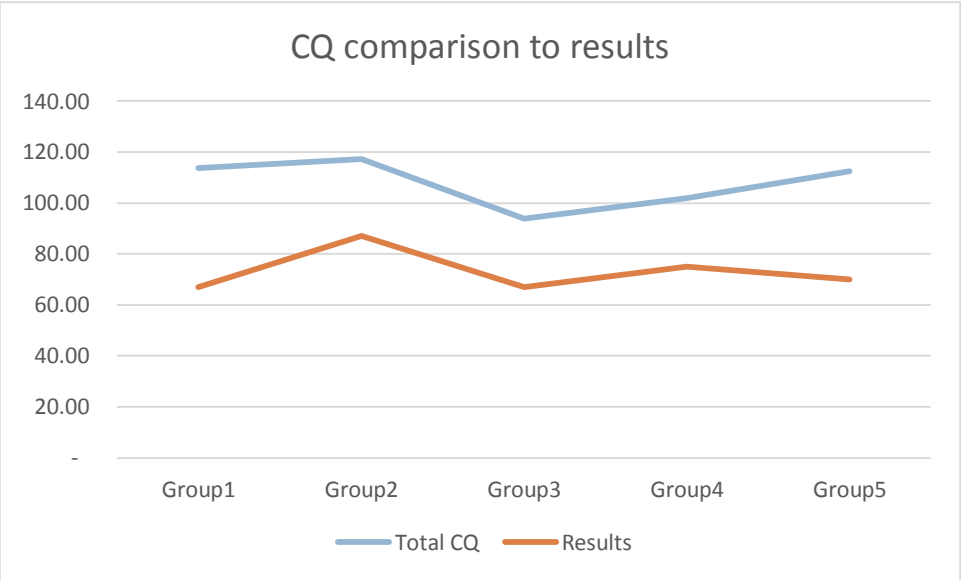
and "5" was the group with the lowest score. Two teams scored the exact same result (which was the lowest mark) for the project, and their rankings were accordingly indicated as being the same (4). In the figure below, Group 1 was thus ranked 3 in relation to Total CQ and ranked last (4) in terms of results.

Figure 5.9: Group rankings – CQ and results

	Metacognitive CQ	Cognitive CQ	Motivational CQ	Behavioural CQ	TOTAL CQ	RESULTS RANKING
Group1	4	3	3	3	3	4
Group2	2	1	1	1	1	1
Group3	5	4	5	4	5	4
Group4	3	5	4	5	4	2
Group5	1	2	2	2	2	3

When the CQ scores were overlain with the results obtained for the specific project (in Figure 5.10 below), Group 2 had the highest CQ and the highest mark in the project. Group 3 had both the lowest average CQ and the lowest result. However, Group 5 with the second highest CQ achieved the second lowest mark. No meaningful conclusion could thus be made based on the trend analysis as the findings were not consistent.

Figure 5.10: Group CQ comparison to results



To understand how all four components of CQ relate to results, a third trend analysis was performed including the CQ scores for each of the underlying components in comparison to the results achieved. Generally, the trend was similar in relation to CQ score vs. results, namely groups with higher component CQ had higher results, for

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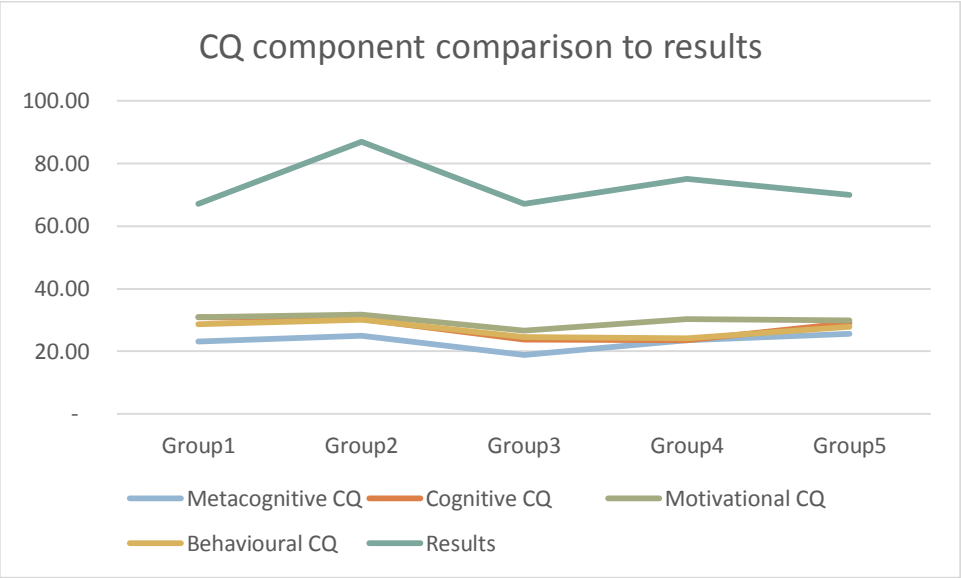
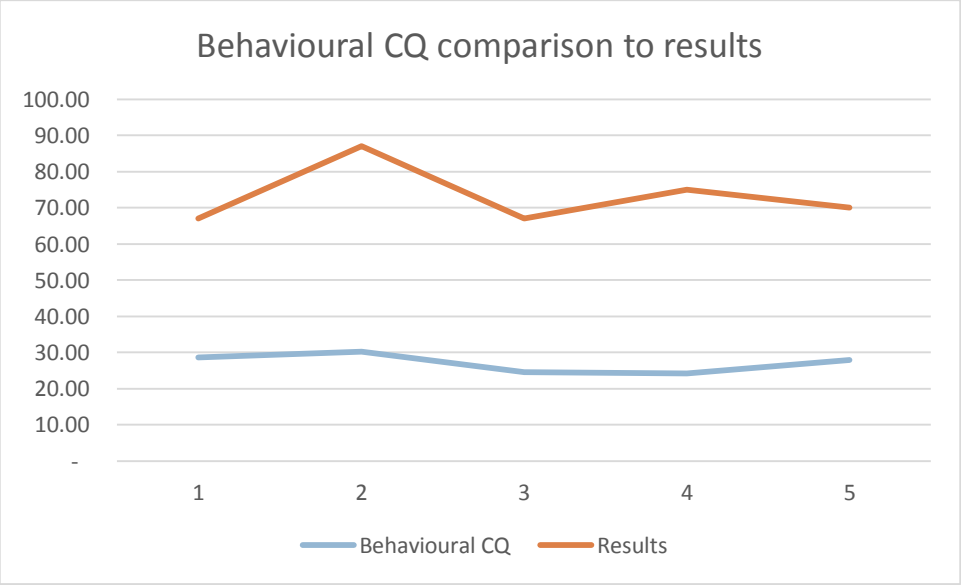
example Group 2 and Group 3 (lower CQ and lower results). However motivational CQ for Group 4, which achieved the second highest mark, was elevated.

Figure 5.11: Group CQ comparison to results



The behavioural CQ scores were overall the lowest and had less prominent patterns regarding the relationship between CQ and results. Group 2 still had both the highest behavioural CQ with the highest results, but Group 4 with the lowest behavioural CQ had the second highest result.

Figure 5.12: Group behavioural CQ comparison to results



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5.1.5. COMPARISON OF MEANS

No conclusions could be made based on the above if it could not be established that the differences as measured by the mean CQ per group were actually different as opposed to being coincidental. An ANOVA was accordingly performed to compare the groups' Total CQ as well as the individual components. The same principle used by Adair et al. (2013) was used to aggregate individual level variables (metacognitive CQ, cognitive CQ, motivational CQ and behavioural CQ) per respondent per group to calculate an aggregate CQ score per group. The assumption was thus that the individuals' CQ scores would increase the group CQ. The individual respondents' CQ scores were aggregated on a component and Total CQ level, after which the mean scores per group were compared.

Intra-class correlations ICC(2) coefficient was calculated to establish the team CQ reliability, using a two-way random effects model with absolute agreement and average measurement (Shrout & Fleiss, 1979). The purpose of this was to ensure that the newly calculated aggregate scores were reliable for further testing. ICC(2) values (average measures) were 0.889 for Total CQ, 0.827 for metacognitive CQ, 0.905 for cognitive CQ, 0.789 for motivational CQ and 0.724 for behavioural CQ. All values exceeded 0.7, i.e. the team level measurement of CQ could be considered reliable (Bliese, 2000; Klein et al., 2000).

Due to the fact that the CQS had been tested extensively in previous research, it was not considered necessary to do validity testing on the associated constructs (CQ, metacognitive CQ, cognitive CQ, motivational CQ and behavioural CQ).

5.1.6. HYPOTHESIS 1

The null hypothesis states that increased cultural intelligence will not have increased task performance in international cross-cultural working groups.

The alternative hypothesis states that increased cultural intelligence will have increased task performance in international cross-cultural working groups.

For the purposes of the ANOVA test, the hypothesis read:

H_0: The mean cultural intelligence is equal across groups 1 to 4 ($\mu_1 = \mu_2 = \mu_3 = \mu_4$)

H_1: At least one group has a different mean cultural intelligence than the other groups (At least one μ_1 differs (i = 1, 2, 3, 4))

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Table 5.4: Descriptive statistics of Total CQ per group

Descriptive statistics

Total CQ

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Group 1	5	113.80	14.307	6.398	96.04	131.56	98	129
Group 2	6	117.17	15.779	6.442	100.61	133.73	92	140
Group 3	5	93.80	16.022	7.165	73.91	113.69	67	109
Group 4	5	101.80	8.319	3.720	91.47	112.13	90	112
Group 5	6	112.50	15.003	6.125	96.75	128.25	83	124
Total	27	108.33	15.792	3.039	102.09	114.58	67	140

Group 2 had the highest mean whilst Group 3 had the lowest mean score on Total CQ. The dispersion of all groups was quite high, with Group 3 the highest and Group 4 the lowest. The standard deviation of the total sample was 15.792, meaning the respondents CQ scores differed considerably. Group 2 had the most significant difference between minimum and maximum CQ scores, with the respondent with the highest total CQ of 140. Group 3 had the second highest difference between minimum and maximum CQ scores, with the respondent with the lowest total CQ of 67.

Table 5.5: Total CQ analysis of variance (ANOVA)

ANOVA

Total CQ

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1991.267	4	497.817	2.438	.077
Within Groups	4492.733	22	204.215		
Total	6484.000	26			

Upon analysis, the difference between groups was not significant, $p > 0.05$, which indicates that although it seemed as though there was a difference between the cultural intelligence levels of the four groups, the difference is not significant. This was also validated by using Tukey post-hoc analysis (Levene Statistic's p-value is 0.861, which is greater than 0.05). As indicated in Table 5.6, al p values were greater than 0.05, substantiating that there were no significant differences between the groups.

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Table 5.6: Total CQ ANOVA Tukey Post-hoc analysis

Multiple Comparisons

Dependent Variable: Aggregate CQ

Tukey HSD

(I) Client name	(J) Client name	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Group 1	Group 2	-3.367	8.653	.995	-29.04	22.31
	Group 3	20.000	9.038	.212	-6.82	46.82
	Group 4	12.000	9.038	.678	-14.82	38.82
	Group 5	1.300	8.653	1.000	-24.37	26.97
Group 2	Group 3	23.367	8.653	.086	-2.31	49.04
	Group 4	15.367	8.653	.412	-10.31	41.04
	Group 5	4.667	8.251	.979	-19.81	29.15
Group 3	Group 4	-8.000	9.038	.899	-34.82	18.82
	Group 5	-18.700	8.653	.231	-44.37	6.97
Group 4	Group 5	-10.700	8.653	.731	-36.37	14.97

The statistical conclusion is to accept H_0 at the 5% level of significance as the evidence is not sufficient to reject H_0 in favour of H_1 for the ANOVA.

The results of the ANOVA thus indicate that as there is not a significant difference in the means between the groups, the null hypothesis for this research question is accepted, namely: H_0: The mean cultural intelligence is equal across groups 1 to 4 ($\mu_1 = \mu_2 = \mu_3 = \mu_4$). As the mean cultural intelligence is equal across the groups, but their results differed (see Figure 5.9), the research question and Hypothesis 1 (see section 3.1) postulating that increased cultural intelligence (Total CQ) increases task performance, could not be proven. Although it thus originally seemed as though increased Total CQ could result in increased task performance (namely the trends observed in Groups 2 and 3), it could not be statistically proven, as there was no significant difference in the mean Total CQ per group. The behavioural component will be further analysed and discussed to understand the effect thereof in this study.

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5.1.7. CQ COMPONENT ANALYSIS

To further enrich the findings, additional testing was performed on the individual components of CQ to understand if there were any observable significant differences, including specifically the component of behavioural CQ. Similar hypothesis testing was performed than in section 5.1.6 where the difference in Total CQ per group was statistically tested via the means of ANOVA. In this section, each of the CQ components, namely metacognitive CQ, cognitive CQ, motivational CQ and behavioural CQ was analysed via an ANOVA to establish if there was a difference in any of the groups' scores obtained per component.

The null hypothesis states that increased metacognitive CQ, cognitive CQ, motivational CQ or behavioural CQ will not have increased task performance in international cross-cultural working groups.

The alternative hypothesis states that increased metacognitive CQ, cognitive CQ, motivational CQ or behavioural CQ will have increased task performance in international cross-cultural working groups.

For the purposes of the ANOVA test, the hypothesis read:

H_0: The mean metacognitive CQ, cognitive CQ, motivational CQ or behavioural CQ is equal across Groups 1 to 4 ($\mu_1 = \mu_2 = \mu_3 = \mu_4$)

H_1: At least one group has a different mean metacognitive CQ, cognitive CQ, motivational CQ or behavioural CQ than the other groups (At least one μ_1 differs (i = 1, 2, 3, 4))

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Table 5.7: Descriptive statistics of component CQ per group

Descriptive statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Min	Max
METACOGNITIVE CQ								
Group 1	5	23.20	3.033	1.356	19.43	26.97	19	27
Group 2	6	25.00	2.966	1.211	21.89	28.11	20	28
Group 3	5	18.80	4.764	2.131	12.88	24.72	14	24
Group 4	5	23.60	3.050	1.364	19.81	27.39	20	28
Group 5	6	25.67	1.506	.615	24.09	27.25	24	27
Total	27	23.41	3.785	.728	21.91	24.90	14	28
COGNITIVE CQ								
Group 1	5	31.00	7.314	3.271	21.92	40.08	20	37
Group 2	6	30.33	9.070	3.703	20.81	39.85	15	42
Group 3	5	23.80	4.658	2.083	18.02	29.58	17	30
Group 4	5	23.60	7.925	3.544	13.76	33.44	10	30
Group 5	6	29.17	4.834	1.973	24.09	34.24	22	36
Total	27	27.74	7.204	1.386	24.89	30.59	10	42
MOTIVATIONAL CQ								
Group 1	5	31.00	3.082	1.378	27.17	34.83	27	35
Group 2	6	31.67	1.862	.760	29.71	33.62	30	35
Group 3	5	26.60	6.107	2.731	19.02	34.18	16	31
Group 4	5	30.40	3.847	1.720	25.62	35.18	27	35
Group 5	6	29.83	5.456	2.227	24.11	35.56	20	35
Total	27	29.96	4.354	.838	28.24	31.69	16	35
BEHAVIOURAL CQ								
Group 1	5	28.60	2.408	1.077	25.61	31.59	26	32
Group 2	6	30.17	2.858	1.167	27.17	33.17	27	35
Group 3	5	24.60	4.393	1.965	19.15	30.05	20	31
Group 4	5	24.20	3.633	1.625	19.69	28.71	20	28
Group 5	6	27.83	5.947	2.428	21.59	34.07	17	33
Total	27	27.22	4.449	.856	25.46	28.98	17	35

The mean score for motivational CQ was the highest at 29.96 and metacognitive QC the lowest at 23.41. As per the Total CQ, the standard deviation per component CQ were also highly dispersed, especially with cognitive CQ (7.204). Group 5 had the lowest dispersed standard deviation per component on metacognitive CQ (1.506), indicating that Group 5's individual respondents' metacognitive CQ scores were relatively close together in comparison to the other groups', as well as the other components. The

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second lowest dispersed standard deviation per component was for Group 2 on motivational CQ (1.862).

Group 5 had the highest mean for metacognitive QC (25.67), with Group 3 having the lowest mean for the same component (18.80). On Cognitive CQ, Group 1's mean was the highest (31) and Group 4's the lowest (23.60). Group 2 had the highest motivational QC (31.67) with Group 3 the lowest (26.60), whilst Group 2 also had the highest behavioural QC (30.17) and Group 4 the lowest (24.20).

To understand whether the differences in the means per CQ component on a group level were indeed significant, an ANOVA was performed, identifying only the metacognitive CQ component as having significant differences. The significance value of the metacognitive CQ is 0.017, which is < 0.05 (see Table 5.8).

Table 5.8: Component CQ analysis of variance (ANOVA)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Metacognitive CQ	Between Groups	152.385	4	38.096	3.807	.017
	Within Groups	220.133	22	10.006		
	Total	372.519	26			
Cognitive CQ	Between Groups	269.019	4	67.255	1.370	.277
	Within Groups	1080.167	22	49.098		
	Total	1349.185	26			
Motivational CQ	Between Groups	80.396	4	20.099	1.072	.394
	Within Groups	412.567	22	18.753		
	Total	492.963	26			
Behavioural CQ	Between Groups	143.800	4	35.950	2.133	.111
	Within Groups	370.867	22	16.858		
	Total	514.667	26			

Based on the ANOVA, there are no significant differences in the means of the groups for cognitive CQ, motivational CQ or behavioural CQ, and no further statistical testing was deemed necessary. As there was, however, a significant difference in the means of the groups for metacognitive CQ, the alternative hypothesis was accepted (H_1), namely: at least one group has a different mean metacognitive CQ, cognitive CQ, motivational CQ or behavioural CQ than the other groups. The null hypothesis (H_0) was thus accordingly rejected. To further understand which groups had significant differences in their means, post-hoc testing was conducted.

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Table 5.9: Metacognitive CQ test of homogeneity of variances for post-hoc analysis

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Metacognitive CQ	1.659	4	22	.195

Due to the fact that the significance value of 0.195 was > 0.05, equal variances were assumed and the assumption of homogeneity of variances was not violated. A Tukey post-hoc analysis was accordingly performed.

Table 5.10: Metacognitive CQ ANOVA Post-hoc test (Tukey)

Multiple Comparisons

Dependent Variable: Metacognitive CQ

Tukey HSD

(I) Client name	(J) Client name	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Group 1	Group 2	-1.800	1.915	.878	-7.48	3.88
	Group 3	4.400	2.001	.217	-1.54	10.34
	Group 4	-.400	2.001	1.000	-6.34	5.54
	Group 5	-2.467	1.915	.701	-8.15	3.22
Group 2	Group 3	6.200*	1.915	.028	.52	11.88
	Group 4	1.400	1.915	.947	-4.28	7.08
	Group 5	-.667	1.826	.996	-6.09	4.75
Group 3	Group 4	-4.800	2.001	.153	-10.74	1.14
	Group 5	-6.867*	1.915	.013	-12.55	-1.18
Group 4	Group 5	-2.067	1.915	.815	-7.75	3.62

*. The mean difference is significant at the 0.05 level.

Significant differences (where $p < 0.05$) were identified between Group 2 and Group 3, as well as between Group 3 and Group 5. The means of the groups are as indicated in the below table. The means were ranked from 1 to 3, with 1 being the highest mean and 3 the lowest mean.

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Table 5.11: Comparison of Group Metacognitive CQ means

GROUP	Mean Metacognitive CQ	Ranking of results
Group 5	25.67	3
Group 2	25.00	1
Group 3	18.80	4

As is seen in the above table, Group 2 had a higher mean than Group 3, and as the difference was significant according to the ANOVA, it can be deduced that Group 2's mean metacognitive CQ is higher than Group 3's. Furthermore, Group 5's mean was higher than Group 3's and based on its significance, it can thus also be deduced that Group 5's mean metacognitive CQ was higher than Group 3's. However, no significant difference was identified between the means of Group 2 and Group 5, thus no additional conclusions could be made.

Due to the fact that Groups 2 and 3 and Groups 3 and 5 had significant differences, it can be assumed that the mean metacognitive CQ per group had an effect on the groups' results. As per the ranking indicated in Table 5.11 Group 2's mean metacognitive CQ and results ranking were higher than Group 3. This was also the case for Group 3 and 5, where Group 5's mean metacognitive CQ and results ranking were higher than Group 3. Based on this, it could be deduced that Groups 2 and 5 with increased metacognitive CQ had increased results.

Although it was proven that increased metacognitive CQ had an effect on increased results, there was no significant difference in the groups' CQ scores for cognitive CQ, behavioural CQ or motivational CQ. The behavioural component of increased CQ thus did not have an effect on the results and the research question of this study and associated Hypothesis 1 (see section 3.1) postulating that the increased behavioural component of cultural intelligence increases task performance, could not be proven.

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5.2. BEHAVIOURAL ANALYSIS

As it was determined that neither the Total CQ nor the behavioural CQ had a significant effect on the results achieved by the groups in the project, and to enrich the analysis on the behavioural component of CQ, the behavioural questions as per the questionnaire were analysed separately. The analysis was done in relation to a group context, taking the increased sample size of 31 respondents (see 4.2.3) into account.

The main components relating to team cohesiveness and task performance as per the literature review were compared between the groups to understand whether there were any significant differences that could relate to increased task performance (see sections 1 and 2 in the questionnaire in Appendix 1, section 8.1). Where specific responses were not completed by respondents, the average value of the other respondents on the specific variable was used as a replacement.

An ANOVA test with the following hypothesis was performed:

H_0: The mean behavioural characteristics are equal across Groups 1 to 4 ($\mu_1 = \mu_2 = \mu_3 = \mu_4$)

H_1: At least one group has different mean behavioural characteristics than the other groups (At least one μ_1 differs (i = 1, 2, 3, 4))

The only behavioural characteristics identified to reject H_0 in favour of H_1 (where $p < 0.05$) (see Table 5.12) related to team relationships, the enjoyment of the project and being able to speak freely. This related to questions 20, 22 and 24 in the questionnaire in Appendix 1, section 8.1.

Table 5.12: Analysis of means (ANOVA) – behavioural characteristics

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Relationships	Between Groups	7.862	4	1.966	3.033	.035
	Within Groups	16.848	26	.648		
	Total	24.710	30			
Enjoyment	Between Groups	14.617	4	3.654	2.902	.041
	Within Groups	32.738	26	1.259		
	Total	47.355	30			
Speaking freely	Between Groups	6.029	4	1.507	5.302	.003
	Within Groups	7.390	26	.284		
	Total	13.419	30			

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As is displayed in Table 5.13, Group 4 had the highest mean in the relationship, enjoyment and speaking freely behavioural characteristics, whilst Group 2 had the lowest mean in the relationship and enjoyment behavioural characteristics. Group 1 had the lowest mean in the speaking freely characteristic. Group 4 had furthermore the least dispersion in all of the three dimensions, meaning the group's respondents' behavioural characteristics was more similar than the other groups. As discussed in section 4.2.3, although Group 4 had a high non-response rate in relation to the cultural intelligence Test section in the questionnaire, the behavioural questions were sufficiently answered by all respondents.

Table 5.13: Descriptive statistics of behavioural characteristics

Descriptive statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
RELATIONSHIPS								
Group 1	5	5.80	1.095	.490	4.44	7.16	4	7
Group 2	7	5.43	.976	.369	4.53	6.33	4	7
Group 3	6	6.50	.548	.224	5.93	7.07	6	7
Group 4	6	6.83	.408	.167	6.40	7.26	6	7
Group 5	7	6.00	.816	.309	5.24	6.76	5	7
Total	31	6.10	.908	.163	5.76	6.43	4	7
ENJOYMENT								
Group 1	5	5.00	1.225	.548	3.48	6.52	4	7
Group 2	7	4.86	1.574	.595	3.40	6.31	3	7
Group 3	6	6.17	.753	.307	5.38	6.96	5	7
Group 4	6	6.67	.516	.211	6.12	7.21	6	7
Group 5	7	5.43	1.134	.429	4.38	6.48	4	7
Total	31	5.61	1.256	.226	5.15	6.07	3	7
SPEAKING FREELY								
Group 1	5	5.60	.548	.245	4.92	6.28	5	6
Group 2	7	6.14	.690	.261	5.50	6.78	5	7
Group 3	6	6.33	.516	.211	5.79	6.88	6	7
Group 4	6	7.00	.000	.000	7.00	7.00	7	7
Group 5	7	6.00	.577	.218	5.47	6.53	5	7
Total	31	6.23	.669	.120	5.98	6.47	5	7

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To understand which groups had significant differences, a Tukey post-hoc analysis was performed due to Levene Statistic's p-value being greater than 0.05 for all three variables:

Table 5.14: Test of homogeneity of variances – behavioural characteristics

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Relationships	1.065	4	26	.394
Enjoyment	2.338	4	26	.082
Speaking freely	2.400	4	26	.076

On the relationships dimension, there was a significant difference between Groups 2 and 4, and on the dimension of speaking freely, Groups 1 and 4 differed, as did Groups 4 and 5. There were, however, no significant differences between the groups on the enjoyment dimension based on the post-hoc testing. No further conclusions could thus be drawn on the enjoyment behavioural characteristic based on the statistical testing performed, specifically on the effect of an increased score in this characteristic in relation to the groups' result rankings.

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Table 5.15: Behavioural characteristics – Post-hoc testing (Tukey)

Multiple Comparisons

Tukey HSD

(I) Client name	(J) Client name	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
RELATIONSHIPS						
Group 1	Group 2	.371	.471	.932	-1.01	1.75
	Group 3	-.700	.487	.611	-2.13	.73
	Group 4	-1.033	.487	.242	-2.46	.39
	Group 5	-.200	.471	.993	-1.58	1.18
Group 2	Group 3	-1.071	.448	.149	-2.38	.24
	Group 4	-1.405*	.448	.031	-2.72	-.09
	Group 5	-.571	.430	.677	-1.83	.69
Group 3	Group 4	-.333	.465	.951	-1.69	1.03
	Group 5	.500	.448	.796	-.81	1.81
Group 4	Group 5	.833	.448	.362	-.48	2.14
ENJOYMENT						
Group 1	Group 2	.143	.657	.999	-1.78	2.07
	Group 3	-1.167	.679	.442	-3.16	.82
	Group 4	-1.667	.679	.133	-3.66	.32
	Group 5	-.429	.657	.965	-2.35	1.50
Group 2	Group 3	-1.310	.624	.251	-3.14	.52
	Group 4	-1.810	.624	.053	-3.64	.02
	Group 5	-.571	.600	.873	-2.33	1.19
Group 3	Group 4	-.500	.648	.936	-2.40	1.40
	Group 5	.738	.624	.761	-1.09	2.57
Group 4	Group 5	1.238	.624	.302	-.59	3.07
SPEAKING FREELY						
Group 1	Group 2	-.543	.312	.429	-1.46	.37
	Group 3	-.733	.323	.186	-1.68	.21
	Group 4	-1.400*	.323	.002	-2.35	-.45
	Group 5	-.400	.312	.705	-1.31	.51
Group 2	Group 3	-.190	.297	.967	-1.06	.68
	Group 4	-.857	.297	.054	-1.73	.01
	Group 5	.143	.285	.987	-.69	.98
Group 3	Group 4	-.667	.308	.224	-1.57	.23
	Group 5	.333	.297	.793	-.54	1.20
Group 4	Group 5	1.000*	.297	.018	.13	1.87

*. The mean difference is significant at the 0.05 level.

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The ranking of the results per groups based on the mean score for the relationship behavioural characteristic (in descending order based on mean scores) are as follows:

Table 5.16: Results ranking of groups with significant behavioural characteristic differences (relationships)

GROUP	MEAN SCORE FOR RELATIONSHIPS	RANKING OF RESULTS
Group 4	6.83	2
Group 2	5.43	1

For the dimension 'relationships', there was a significant difference between Groups 2 and 4, with Group 4's mean score on the relationship dimension (6.83) exceeding that of Group 2 (5.43). Group 2's result ranking was however higher than Group 4's ranking. As it was proven via statistical testing that the difference in the groups' means is significant, it can be assumed that a lower score in the relationship dimension was related to a higher result in the project for Group 2. The specific questionnaire question that was answered to determine this was: "The relationships I built with my group members were very important to me." (See question 20 in Appendix 1, section 8.1)

In relation to speaking freely, Groups 1 and 4 differed, as did Groups 4 and 5. The mean scores for the groups and associated ranking (in descending order based on mean scores) were:

Table 5.17: Results ranking of groups with significant behavioural characteristic differences (speaking freely)

GROUP	MEAN SCORE FOR SPEAKING FREELY	RANKING OF RESULTS
Group 4	7.00	2
Group 5	6.00	4
Group 1	5.60	4

It can thus be assumed that Group 4's mean score was indeed higher than Group 5's, and that Group 4's mean score was indeed higher than Group 1's. It can thus be assumed that Group 4's mean score is higher than the scores for both Groups 5 and 1. However, it could not be established that Group 5's mean score was indeed significantly higher than Group 1's mean score. Group 4 also had a higher results ranking than both Groups 5 and 1.

On the dimension of speaking freely, it can accordingly be concluded that a higher score in this behavioural characteristic related to a higher result for Group 4. This is based on

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the fact that Group 4's mean scores were higher than both Groups 1 and 5. The question in the questionnaire relating to this specific component was: "It is important for me to be able to say what I want freely". (See question 24 in Appendix 1, section 8.1)

5.2.1. EXPLORATORY REGRESSION

Although multiple regression is normally not performed on small sample sizes, an exploratory regression analysis was performed to understand whether there were any predictors in the data relating to increased task performance, as measured by results. Very little of the variables were of any predictive nature – these were narrowed down to four specific questions in the questionnaire.

Table 5.18: Exploratory regression model summary on behavioural characteristics

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.554[a]	.307	.200	7.000

a. Predictors: (Constant), Q16: I experienced increased stress during the project, Q10: The mark for the project was very important to me, Q18: I made great effort to understand other team members' opinions, Q1: I was able to adapt to the way other members in my group worked.

It should be noted that the predictive value is considered relatively low, with R being 0.554, whilst the proportion of variance explained was only 20% (Adjusted R Square). The low predictive nature could be because of the small sample size used. In combination, the four predictors were considered as significant with $p < 0.05$.

Table 5.19: Exploratory regression model of fit on behavioural characteristics

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	563.956	4	140.989	2.877	.043[b]
	Residual	1273.980	26	48.999		
	Total	1837.935	30			

a. Dependent Variable: Results

b. Predictors: (Constant), Q16: I experienced increased stress during the project, Q10: The mark for the project was very important to me, Q18: I made great effort to understand other team members' opinions, Q1: I was able to adapt to the way other members in my group worked.

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The only significant variable ($p < 0.05$) identified was the question relating to the mark of the project, namely: "The mark for the project was very important to me." (See question 10 in Appendix 1, section 8.1)

Table 5.20: Behavioural characteristics - Significant coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	67.726	15.489		4.373	.000
	Q1: I was able to adapt to the way other members in my group worked.	.752	1.367	.098	.550	.587
	Q18: I made great effort to understand other team members' opinions	-2.352	1.541	-.263	-1.526	.139
	Q10: The mark for the project was very important to me	3.388	1.485	.383	2.281	.031
	Q16: I experienced increased stress during the project	-.892	.868	-.183	-1.027	.314

a. Dependent Variable: Results

The mean scores on a group level for the importance of the project's mark are indicated in Table 5.21 (in descending order based on mean scores):

Table 5.21: Comparison of behavioural characteristics to results

Q10: The mark for the project was very important to me

GROUP	MEAN	RANKING OF RESULTS
Group 2	6.71	1
Group 4	6.50	2
Group 3	6.00	4
Group 1	5.80	4
Group 5	5.57	3

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Groups 2 and 4 were the groups with the highest mean scores in relation to the importance of the project's mark, and these groups also had the highest result ranking. The same trend was observed with Groups 1 and 5 having both the lowest mean scores as well as the lowest result rankings. Based on the above, it can be argued that when there is an increase in the mean score of the importance of the project's mark, there was a positive relationship to the results ranking. However, due to the small sample size and the low proportion of variance explained by the model, sole reliance cannot be placed on these results.

5.2.2. REPOSITORY OF OPEN-ENDED QUESTIONS

A repository of responses was collated based on the open-ended questions to understand whether additional factors not covered by the Likert-scale questions provide insight into the relevant research questions (see Appendix 2, section 8.2). Four open-ended questions were asked and multiple spaces for answers were provided, thus a respondent could provide more than one answer per question should they have wanted to. (See questions 47, 48, 49 and 50 in Appendix 1, section 8.1). The responses were grouped based on common themes, with the following results:

Table 5.22: Repository of biggest cultural differences

WHAT IN YOUR OPINION WERE THE BIGGEST CULTURAL DIFFERENCES?	NUMBER OF COMMENTS	% OF TOTAL
How opinions are expressed, accepted and respected	21	36%
Other	17	29%
Language barrier, communication	13	22%
Commitment, sense of urgency & work ethic	7	12%
Grand Total	**58**	**100%**

Table 5.23: Repository of what helped the most with task performance

WHAT HELPED THE MOST WITH THE TASK PERFORMANCE IN YOUR GROUP?	NUMBER OF COMMENTS	% OF TOTAL
Other	15	35%
Frequent & clear communication	8	19%
Friendliness & respect	6	14%
Timelines & time management	6	14%
Proper task allocation & expectation setting	5	12%
Cooperation	3	7%
Grand Total	**43**	**100%**

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Table 5.24: Repository of the key challenges working in the group

WHAT WERE THE KEY CHALLENGES WHEN WORKING IN THE GROUP?	NUMBER OF COMMENTS	% OF TOTAL
Other	15	34%
Communication / language barrier	10	23%
Lack of commitment / trust	5	11%
Different work ethic & associated understanding	4	9%
Strong, unbendable / authoritarian personalities	4	9%
Not being respectful / accepting others' input	3	7%
Time & schedule differences	3	7%
Grand Total	**44**	**100%**

Table 5.25: Repository of common values in the group

WHAT WERE THE COMMON VALUES IN THE GROUP?	NUMBER OF COMMENTS	% OF TOTAL
Other	27	27%
Success / completion / perseverance	14	14%
Cooperation / collaboration / team work	12	12%
Friendliness / friendship / kindness	10	10%
Honesty / integrity/ trust	8	8%
Happiness / fun / positivity	6	6%
Respect / understanding	6	6%
Communication	5	5%
Hard work	5	5%
Responsibility / accountability	3	3%
Efficiency	2	2%
Cooperation / collaboration	1	1%
Grand Total	**99**	**100%**

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6. DISCUSSION OF RESULTS

This research endeavoured to establish the effect that increased cultural intelligence, with a specific focus on behaviour, has on task performance. Behaviour is classified as both Behavioural CQ but also behavioural characteristics, whether it relates to national values or individual aggregated characteristics. It is argued that there is not a single component that explains behaviour, but rather a set of interlinked factors. Due to this fact, each of the various sections of analyses is firstly discussed separately, before an overall summary is done based on the findings to answer the research question in Chapter 3.

6.1. GROUP COMPOSITION

Each of the five groups in this study's sample selection was validly classified as international and cross-cultural in relation to the scope of this research. This was due to the fact that each of the groups had a representation of each of the nationalities (South African, Chinese and American), although not in equal proportion, which has been discussed in section 4.2.3. Groups contain aggregate attributes because of individual members' characteristics (Zoltan, et al., 2013) however, Maltarich et al., (2016), argued that is not only about individual characteristics, but aggregate behaviour, thus the individuals' demographics were analysed, as well as national behavioural orientation, which is considered as synonymous to aggregate behaviour.

6.1.1. EFFECT OF DEMOGRAPHICS ON GROUP CULTURAL INTELLIGENCE

AGE AND FOREIGN EXPOSURE

Group 4 had the most respondents being of an older age (four respondents aged 30 years or older) (see Table 5.1), whilst Group 2 had the respondents with the most foreign experience (classified as foreign exposure as per Table 5.3), with two respondents who had travelled to more than three continents, two respondents who had travelled to more than 10 countries, and two respondents who could speak three languages.

The Total CQ of Group 4 only ranked fourth (second last), but Group 2's Total CQ ranking was first. Ward et al. (2009) found that the average CQ of older students with more

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foreign experience is higher than younger students with less foreign experience, which was substantiated by the findings in Group 2 (increased foreign experience). The findings in Group 2 is also contrary to the findings of MacNab and Worthley (2012), who argued that international travel experience did not have a meaningful relationship with CQ development. As is seen in this study, foreign experience (regardless of age), contributed to an increased Total CQ in Group 2.

However, the results of Group 4 is opposed to the findings by Ward et al. (2009), because even though Group 4 had the most older students (respondents), their Total CQ was not ranked significantly higher than any of the other teams.

MANAGEMENT EXPERIENCE

As per Table 5.2, Group 5's respondents had the highest cumulative years' management experience, followed by Groups 1 and 3. MacNab and Worthley (2012) argued that management experience did not affect CQ, which was apparent in the results of this research as the group with the highest CQ (Group 2) had the second least number of years' management experience. Group 5 did, however, have the second highest Total CQ, followed by Group 1, whilst Group 3 had the lowest Total CQ. The results based on management experience is thus inconsistent, as there is no clear relationship in terms of increased years in management in relation to Total CQ.

GENDER

MacNab and Worthley (2012) found that women had a higher self-efficacy in their study. As per Table 5.1, the majority of respondents were female, with Group 2 having a female-only group. Group 2 ranked the highest in both the results and CQ. Bücker et al. (2015) also found that women have higher CQ and assumed that women would be more successful in foreign assignments. The fact that Group 2 performed the best in the project supports Bücker's et al. (2015) argument, which could be due to the higher self-efficacy as argued by MacNab and Worthley (2012).

SUMMARY

The demographical analysis on a Group level highlighted several characteristics that could have attributed to Group 2's increased CQ, which include increased foreign exposure and the fact that the group consisted of only female respondents. It was, however, not apparent that age or management experience affected the group's Total CQ. Due to the fact that there were no significant trends attributable to the Group with

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the lowest Total CQ (Group 3), no meaningful conclusions could be made based on predictive demographics on a group level, but it can be assumed that specific demographics in combination with other attributes may have had a positive influence on increased Group CQ.

6.1.2. EFFECT OF NATIONAL CULTURAL ORIENTATION ON GROUP RESULTS

Group 5's respondents had a perfect distribution of cultures, as it consisted equally of South African, American and Chinese students, whilst Group 1 had an equal number of American and Chinese students and Group 2 had an equal number of South African and American students. Group 3 was the only group with a fourth nationality – this group also had an equal number of American and Chinese respondents.

The composition of groups is argued to play a critical role in the effectiveness of the group working and associated task performance, due to shared values (Adair, et al., 2013), national cultures (Hofstede, 1983), communication (Chen & Lin, 2013) and sources of motivation (Zaal et al., 2015). Firstly, a team's shared values, according to Adair, et al. (2013), should increase task performance, and as it was postulated by Hofstede (1983) that team members will be able to recognise and associate themselves with cultures similar to their own (reduced cultural distance), it is expected that where there are cultural overlaps, team shared values should be more prevalent and affect task performance positively. Where teams thus had shared national cultural dimensions, it was assumed that their task performance would be more effective, which would be represented by a higher ranking in the results.

As discussed in Section 0, the three nationalities, namely South African, American and Chinese, have overlapping cultural dimensions, namely Masculinity and Uncertainty Avoidance. Due to the shared values and the equal group composition, it was argued that Group 5's results should have been higher than the other groups because of shared cultural values, however their results were only ranked third out of the five working groups.

The second overlap in relation to national cultural dimensions related to the South African and Chinese nationalities. Group 2 contained an equal number of South African and Chinese students, where the overlapping cultural dimensions are Power Distance, Long-term orientation and Indulgence, as was discussed in Section 0. It was argued that these

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shared values would increase the effectiveness of group work, and Group 2 did indeed score the highest in terms of their results.

Groups 1 and 3 scored the lowest in terms of result ranking (see Figure 5.9), with their group composition both having an equal number of American and Chinese students. As discussed in Section 0, the Chinese and American nationalities have few cultural dimensions in common, limited to Masculinity (Masculinity-Femininity) and Uncertainty Avoidance (weak). However, the largest difference between any of the nationalities in this study's sample selection relates to the difference in Individualism between China (extremely collectivist) and America (extremely individualist).

Differences in Individualism as per Hofstede (1983; 2011) relate to the importance of the individual and one's individual wants and needs opposed to the group's wants and needs. Zaal et al. (2015) argued that the source of motivation affects how individuals behave within a group, which includes whether it is for personal interest or towards the group goal. This could cause difficulties in terms of shared values, as per Adair, Hideg & Spence (2013), which in turn may have a negative effect on group work. Furthermore, communication (Chen & Lin, 2013), may also be impacted in the sense of increased miscommunication, or the lack of communication due to the fact that collectivist nations prefer to not speak out against the group, if their opinions differ and would not necessarily voice their personal opinions (Hofstede, 2011).

Group 3 ranked lowest in terms of results (see Figure 5.9) and based on the findings, it can be argued that the increased cultural distance (or cultural dissimilarity), specifically in relation to Individualism-Collectivism between group members from different nationalities, affected task performance negatively.

Based on the results, it can thus be argued that shared national cultural values with specific relation to Hofstede's (1983) cultural dimensions of Power Distance, Long-term vs. Short-term orientation and Indulgence vs. Restraint could have contributed to the results of Group 2, whilst the dissimilar cultural dimensions in Group 3 in relation to Individualism-Collectivism could have decreased the results. On a group level, it can thus be concluded that national cultural dimensions, especially the dominance of certain cultures with either shared or dissimilar cultural dimensions, had an effect on task performance. Where groups had less cultural distance (i.e. overlapping cultural dimensions), their task performance was increased.

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6.2. CULTURAL INTELLIGENCE PER GROUP

6.2.1. AGGREGATE CULTURAL INTELLIGENCE

Groups 2 and 5 had the highest number of respondents, namely six, as opposed to Groups 1, 3 and 4 with five respondents. As it is accepted that an increase in individuals' CQ will increase group CQ (Adair et al., 2013) and the fact that CQ is an aggregate concept (Earley & Ang, 2003), it can accordingly be assumed that an increase in group size should quantitatively aggregately increase Total CQ. Group 2's CQ was ranked as being the highest, followed by Group 5 (see Figure 5.9).

Furthermore Adair et al. (2013), also argued that individuals with increased CQ will contribute to an increase in the total CQ of the group. This was found in Group 2, which had the biggest difference in Total CQ on an individual respondent level (namely having the respondents with the biggest difference in the highest and lowest CQ scores in a group), but still had the highest Total CQ. It can thus be deduced that a significant increased individual's CQ in a group, increases the Total CQ of a group.

On the analysis of the CQ components on an individual respondent level in relation to the associated groups, it was found that respondents had major differences in their scores on specific CQ components. The most prevalent was the difference in cognitive CQ in all groups (see section 5.1.2). The individual differences on a component level were further analysed and are discussed in Section 6.3.

6.3. CULTURAL INTELLIGENCE IN COMPARISON TO RESULTS

6.3.1. HYPOTHESIS 1

Jyoti and Kour (2015) found that individuals and managers with high CQs have increased task performance in cross-cultural environments. Preliminary trend analysis and descriptive results supported their findings in this research (see Figure 5.9), as Group 2 had both the highest CQ and the highest results, whilst Group 3 had the lowest CQ and the lowest results.

The research question of this study focusing on intercultural management, and asking if the behavioural component of increased cultural intelligence affect task performance within international cross-cultural working groups**,** was formulated via hypothesis 1 with the following null and alternative hypotheses:

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The null hypothesis stated that increased cultural intelligence will not have increased task performance in international cross-cultural working groups.

The alternative hypothesis stated that increased cultural intelligence will have increased task performance in international cross-cultural working groups.

The results of the statistical testing via an ANOVA pointed to the fact that there was no significant difference in the means of the Total CQ scores between the groups and thus, the null hypothesis for this research question was accepted. Increased cultural intelligence did thus not increase task performance in this study as the Total CQ scores of groups with higher results and thus increased task performance, did not significantly differ from the other groups.

The findings in this research is thus opposed to the previous findings by Jyoti and Kour (2015). The study performed by Jyoti and Kour (2015) was based on 225 Indian managers, and task performance was measured on an individual level (via performance appraisals). Their research thus had a less diverse sample selection in relation to cultural values (with specific reference to national cultural dimensions), although the sample selection contained various Indian cultures. The impact of behaviour in a multicultural context was thus not sufficiently explored in the study of Jyoti and Kour (2015), which could explain why there was not a direct relationship between increased CQ and task performance in the current study. Furthermore, as has been highlighted in section 6.1.2, the national cultural dimensions played a significant role in task performance and it is possible that the behavioural component in this analysis exceeded the effect of CQ on task performance, due to the specific group composition.

Cultural intelligence as defined by Earley and Ang (2003) and used in this research is an individual construct, and not a group construct. The findings of Jyoti and Kour (2015) was based on individual task performance and not task performance within a group setting. It is possible that the individuals within the groups' results were in line with task performance, but not on a group level. This will have to be included in future studies to understand the relationship between CQ and individual task performance vs. group task performance.

As the purpose of this study is to increase the understanding of the construct of CQ, with specific reference to its components as well as the contextualization of CQ, the individual components of CQ were further analysed. It was found in section 0 that there was only a significant difference between the groups in terms of metacognitive CQ.

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Increased behavioural CQ thus did not affect increased task performance, as per the results of the ANOVA testing. It was originally postulated that new shared behaviour within an intercultural group context would be increased should the group members have increased CQ (Adair et al., 2013), as the group members would be able to adapt to the new cultural circumstances. However, this argument was not supported in this study, as the five groups' behavioural CQ did not significantly differ and did thus not effect task performance.

Thomas et al. (2008) referred to intelligent behaviour in the realm of cultural intelligence as being able to focus on similarities across different cultures and be able to display appropriate behaviour based on previous knowledge obtained. The behavioural concept of cultural intelligence in light of Thomas et al. (2008) is thus a much more integrated concept than the definition of Earley and Ang (2003), as it is in essence a combination of behavioural CQ and metacognitive CQ. This is described as mindfulness (Thomas, 2006), when appropriate behaviour is displayed after previous knowledge and experience has been applied. The findings in this study points to the fact that the behavioural component of CQ may not be significant on its own, but could be in combination with metacognitive CQ, which is in line with the findings of Bücker et al. (2015).

Behavioural CQ, according to Ang et al. (2007), relates to appropriate language, word choices, tones and body language. Based on the results obtained, it could be that other behavioural components or attributes could have influenced the behaviour of respondents, which was not only related to increased behavioural CQ.

In addition to behavioural attributes, communication plays a critical role in behavioural CQ (Van Dyne et al., 2012). Due to the fact that 22% of the respondents (see Table 5.22) identified that language was one of the biggest cultural differences and 23% indicated it as one of the key challenges to work in the group (see Table 5.24), it can be deduced that the effect of poor communication may have influenced team behaviour and the associated CQ.

In task performance, it can be argued that language played a negative role in the ability to adjust individual behaviour. Janssens and Brett (2006) argued that team members being fluent in a common language may dominate discussions and make it difficult for others to voice their opinions, which could deter group work, this can be assumed because of the cultural dimension of Individuality in section 6.1.2. Furthermore meaningful participation has also been identified by Janssens and Brett (2006) as a

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requirement to ensure dialogue, which will assist with identifying compatibilities, same with team inclusion (Aritz & Walker, 2014), which will also be negatively affected by domineering or non-participating team members.

There was a significant difference between Group 2 and Group 3's mean metacognitive CQ, which indicated that Group 2's metacognitive CQ was higher than Group 3's, which was in line with their higher project results as well. The same was found between Groups 3 and 4, where both the metacognitive CQ and results were higher for Group 4 than for Group 3.

Metacognitive CQ, as defined by Earley and Ang (2003) and Ang and Van Dyne (2003), is the ability to be mentally aware of cultural surroundings and being able to evaluate them. Bücker et al. (2015) compared metacognitive CQ to being conscious of cultural cues, and a behavioural map is accordingly being created by individuals based on previous experiences. The significance of the effect of increased metacognitive CQ on task performance is because Behavioural CQ refers to the actual adaptation of behaviour, whilst metacognitive CQ refers to the understanding of how to adapt the behaviour.

The original argument in this research stating that CQ needs to be translated into action in order to achieve increased results has thus been disproven, as it was found to be more important to know what to do in an actual situation, based on previous experience or knowledge gained. It needs to be taken into account that the CQ test was self-reporting, thus the respondents' own perceived behaviours were reported on and used for analysis, which has been highlighted as a limitation in this paper. It could thus be possible that the respondents perceived their behavioural CQ and their ability to adapt as higher than they actually were. This is due to the fact that people's perceptions and associated behaviour are due to their own perceptions of reality and not reality itself (Robbins & Judge, 2013).

Adair et al. (2013) found that shared values in a group context are cultivated in a heterogeneous group where there is an increased behavioural CQ and metacognitive CQ. Chen & Lin (2014) argued that increased metacognitive CQ facilitates knowledge sharing. Both shared values and the ability to share knowledge have been argued in this study to improve task performance. This has been substantiated by the findings in the increased results in Groups 2 and 4, due to increased metacognitive CQ.

Furthermore, metacognitive CQ, according to Van Dyne et al. (2012), also includes being able to strategize before cultural encounters, which will include proper preparation,

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whether mental or otherwise. Due to the fact that the respondents were all part of a structured programme, it could be argued that they were more prepared based on previous course work or other lecture preparations for expected encounters. Thomas (2006) referred to the mapping of cultural behaviour as content knowledge, which can be deduced from cultural values and norms. He stressed, however, that it needs to be constantly developed based on previous knowledge obtained, as well as executing the newly learned behaviour in order to be effective, which is very closely associated to increased metacognitive CQ. The argument was further strengthened by the findings of Chen and Lin (2014), who argued that metacognitive CQ is very important for knowledge sharing in teams, as the more knowledge is being shared, the less miscommunications and conflicts there are that could deter task performance.

Team shared values, according to Adair, Hideg and Spence (2013), are very important for effective functioning in culturally diverse settings. Adair et al. found that both behavioural and metacognitive CQ have a positive effect on cross-cultural team shared values, which in turn increases team performance. Although no significant difference between the means of behavioural CQ were found between the groups, it was found that increased metacognitive CQ does increase task performance, based on improved results. However, meaningful participation, according to Janssens and Brett (2006), is critical to ensure proper group work, especially if it is difficult to create shared values. Of the respondents, 14% indicated that success/completion/perseverance were common values in the group (see Table 5.25), which is in line with the findings of Janssens and Brett.

It should be noted that all groups had seemingly big differences on an individual respondent level on cognitive CQ (see section 5.1.3), but these differences were not statistically significant when analysed via ANOVA on a group level. It was thus assumed that the individual respondents' results would not have significantly influenced the groups' aggregate results. As the differences between the groups in motivational CQ were also not significant, the argument of Thomas et al. (2012) that motivation is not a necessary requirement for CQ was supported.

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6.4. BEHAVIOURAL ANALYSIS

National culture (Hofstede, 1983) as part of the collective mental programming played an important role based on the results, especially in relation to the behavioural orientation of individuals within groups. Specific behavioural questions were included in the questionnaire and national culture's effect on task performance was subsequently identified and analysed. The three components identified that had a significant difference and thus statistical consequence related to relationships, enjoyment and being able to speak freely (see Section 0). Furthermore team processes and group goals were identified as two additional behavioural characteristics having an impact on task performance.

RELATIONSHIPS

As discussed in Section 0, all three nationalities in the sample selection (South African, Chinese and American) were masculine orientated. On the dimension of relationships, there was a statistically significant difference between Groups 2 and 4, where Group 2 scored lower than Group 4 on "The relationships I built with my group members were very important to me" but achieved higher results. Where group members thus did not focus on relationships, task performance was increased.

The cultural dimension of Masculinity refers to the social role divisions between men and women in a nation (Hofstede, 1983). According to this dimension, there is a clear distinction between the traditional roles of men and women in societies where there is a clear role division in terms of Masculinity and Femininity. From this, men are assumed to be more assertive and dominant, as opposed to women who are considered more caring and service-oriented.

As discussed, Masculinity vs. femininity is a cultural dimension defined by Hofstede (2004) recognized by dominant values, with Masculinity specifically referring to assertiveness, the acquisition of money and things, an emphasis on performance and the fact that you live in order to work. It is assumed that individuals with that specific cultural orientation would be task-oriented (because there is an emphasis on performance and work), and societies will express qualities of assertiveness to ensure that specific goals are reached. This was substantiated by the findings that Group 2, with a low score on the importance of relationships, was able to achieve a higher result ranking.

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The finding that relationships are less important in terms of effective task performance is contradictory to the findings of Cheng et al. (2012), who found that a more relational (feminine) orientation increased team performance. However, their study was longitudinal in nature, analysed team effectiveness and focused on teams with no common cultural dimensions. There was thus an increased focus on the effect of time in the research, as opposed to the current study that was cross-sectional and only focused on a single project.

Furthermore, task performance is seen as distinct from team effectiveness (although it can be broadly assumed that team effectiveness could contribute to task performance), as a task can still be completed successfully even though the team did not work effectively. The cultural dimensions' attributes thus had different effects on the constructs identified. In the study of Cheng et al. (2012), because of its long-term focus, the effect of relationships was much more prevalent (Hofstede's (1983) femininity cultural dimension), as opposed to the current cross-sectional study focusing on a specific task, where goal orientation and an increased focus on achievement was assumed (Hofstede's Masculinity cultural dimension).

The Masculinity scores of the three nationalities were 63 (South Africa), 66 (China) and 62 (United States) (see Figure 2.1). In both Groups 2 and 4 the majority of the respondents were Chinese, with Group 4 having the least number of Americans and marginally the lowest Masculinity score (see Figure 5.1). It could thus be argued that groups with a composition of nationalities with a higher masculine score would have increased task performance. It should however be noted that individual cultural orientations can differ within nations, which was not measured in this study, as Hofstede's country scores have been used for analysis obtained from The Hofstede Centre (n.d.). Due to the fact that individual cultural orientations may differ, it could be possible that the individuals in Group 4 had a more feminine orientation as opposed to Group 2.

ENJOYMENT

Enjoyment can be associated with Hofstede's (2011) cultural orientation of Indulgence in the cultural dimension of Indulgence vs. Restraint. As discussed, Indulgence relates to enjoying life and having fun. Only 6% of respondents indicated that part of their common values in the group were happiness/fun/positivity (see Table 5.25). Although the orientation of enjoyment has been identified as being significant in terms of the differences between the groups, there were no significant differences between the

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specific groups upon further analysis. No further conclusions can thus be drawn on the difference in group composition or the effect of the level of enjoyment on task performance.

BEING ABLE TO SPEAK FREELY

Being able to speak freely may also relate to Masculinity, due to being able to be assertive, but individualistic orientated nations' (Individualism-Collectivism) characteristics could also have played a role as these cultural dimensions include being able to speak one's mind (Hofstede, 1983; 1994; 2011). Edmondson (1999) advocated that team members need to feel safe in a group environment to express their opinions or behaviour. It could be argued that certain process losses could take place (Janssens & Brett, 2006) as team members may not be comfortable contributing their unique perspectives, which could be because of the group environment, but also for example because of the dominance of certain nationalities or genders (Cotton, et al., 2013). This is specifically a risk in groups consisting of nationalities of a collective cultural dimension, as individuals tend not to voice their opinions should they differ from the group (Janssens & Brett, 2006). Janssens and Brett (2006) also argued that cultural principles will have an effect on information extraction in teamwork, thus if an individual is not able to speak freely, it will be more difficult to share information.

The biggest difference in terms of cultural dimensions between the three nationalities related to Individualism. The scores of Individualism for the three countries were 65 (South Africa), 20 (China) and 91 (United States) (see Figure 2.1). It is thus assumed that groups containing a majority of Chinese respondents may be prevalent to being more Collectivist orientated, and may not be as confident voicing their opinions. The groups where this could possibly have played an influence were Groups 2 and 4, where there were a higher proportion of Chinese students as opposed to South African and American students. Yet Group 2 achieved the highest results, followed by Group 4.

With reference to Table 5.17, a higher score for the dimension of speaking freely, namely "It is important for me to be able to say what I want freely", indicated a higher result. This was found in Group 4's score in relation to both Groups 1 and 5. Furthermore, this was substantiated by the repository of open-ended questions (see Section 5.2.2), where one of the biggest cultural differences was indicated as being "How opinions are expressed, accepted and respected" (see Table 5.22). In terms of Brislin et al. (2006), this was verbalized as being able to delay judgement in intercultural situations.

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TEAM PROCESSES

One of the additional variables identified via the repository of open questions related specifically to team processes. Team culture is beneficial in group work, according to Shin et al. (2015), which can be created via internal processes and role expectations being created. This was substantiated by the findings in this research, with specific reference to 12% of respondents indicating that "Proper task allocation & expectation setting" contributes to team performance (see Table 5.23). Furthermore, key challenges that were identified by respondents relating to work in the group included: "Different work ethic & associated understanding" (9%) (see Table 5.24) and respondents identified one of the biggest cultural differences as: "Commitment, sense of urgency & work ethic" (12%) (see Table 5.22). These items point to the fact that the most frustration was because of process breaks, or where all team members did not understand or did not conform to the team's processes, role expectations or work ethic.

GROUP GOALS

According to the research of Zoltan et al. (2013), aggregate attributes in a group context consist of certain individual characteristics of the members. This was substantiated by both the CQ testing as well as the behavioural orientation of individuals in groups. In the CQ testing, it was found that individuals with higher CQ scores increased the mean value of the group's CQ scores, which is in agreement with Adair et al. (2013). Furthermore, individual behavioural attributes – whether they were in line with Hofstede's (1983; 2011) cultural dimensions or other behavioural orientation components, were found to have influenced groups as a whole (see Section 0). However, Maltarich et al. (2016) argued that aggregate behaviour is more than simply the individual characteristics, and a group goal orientation needs to be present to ensure cohesiveness. This was found via the exploratory predictive nature of groups wanting to achieve a higher mark (see Section 5.2.1).

Group 2, with the highest mean score on the question "The mark for the project was very important to me" (see Table 5.21), scored the highest in terms of the result ranking, with Group 4 with the second highest mean score being ranked second. Gong et al. (2013), argued that team information exchange is facilitated when there is a shared understanding of emphasised on achieving results. Rational goal (focus on results) Shin et al. (2015) – team culture is advantageous

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The fact that all three nationalities in the sample selection were very closely aligned to Hofstede's (1983) cultural dimension of Masculinity may have played a significant role in their behavioural orientation. Masculine values include to strive and stress achievement and competition, but also being assertive, task-oriented and ensuring specific goals are achieved (Hofstede, 1983; 1994; 2011). This is closely associated to the fact that one of the possible predictive variables related to the desire to achieve a good mark in the project. Individualistic nations are also more focused on tasks, which could also have contributed to this specific variable.

The importance of goal orientation, as per the research of Maltarich et al. (2016), was also prevalent in the respondents' listed common values in the group, namely: "Cooperation / collaboration / team work" (12%) (see Table 5.25). This was also apparent in the section relating to what helped the most with task performance: "Cooperation": (7%) (see Table 5.23).

6.5. SUMMARY OF FINDINGS

This study focused on the research question:

In intercultural management, does the behavioural component of increased cultural intelligence affect task performance within international cross-cultural working groups?

The research question was answered in part by the analysis of cultural intelligence, as well as the CQ components, with specific focus on behavioural CQ. Furthermore the behavioural component was further analysed based on behavioural characteristics as well as national cultural dimensions.

There was no significant difference in the cultural intelligence per group and as such it was not proven that increased cultural intelligence has a positive effect on task performance within international cross-cultural working groups. Furthermore, the behavioural component of cultural intelligence also did not significantly contribute to task performance – the only CQ component that affected task performance was metacognitive CQ. However, the behavioural characteristics of the groups, as well as certain demographics, had significant effects on the groups' results.

The behavioural orientation, characteristics and demographics that affected task performance in relation to the result ranking per group are summarised as follows:

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Table 6.1: Summary of characteristics of increased task performance on a group level

ITEM	EFFECT ON TASK PERFORMANCE	SECTION
Foreign exposure	More foreign exposure – increased task performance	6.1.1
Gender	Female respondents – increased task performance	6.1.1
Cultural dimensions	Power Distance, Short-term Orientation, Indulgence – increased task performance	6.1.2
Metacognitive CQ	Increased metacognitive CQ – increased task performance	6.3
Relationship orientation	More masculine – increased task performance	6.3
Ability to speak freely	More masculine – increased task performance	6.3
Team processes	Proper task allocation and setting of expectations – increased task performance	6.3
Importance of mark	Higher goal orientation – increased task performance	6.3

Table 6.2: Summary of characteristics of decreased task performance on a group level

ITEM	EFFECT ON TASK PERFORMANCE	SECTION
Cultural dimensions	Increased Individualism orientation in combination with strong Collectivist orientation – decreased task performance	6.1.2
Communication	Language barriers – decreased task performance	6.3.1

In summary the research question was answered by establishing that in international cross-cultural working groups, task performance was not increased by cultural intelligence, or the behavioural CQ. However task performance was increased by certain demographic factors namely increased foreign exposure and gender (female), specific behavioural characteristics, namely increased focus on team processes and goals, and national cultural dimensions including Masculinity, small Power Distance, Short-Term Orientation and Indulgence. Task performance was furthermore decreased by cultural dissimilarity, especially in the light of the orientation of Individualism, as well as communication difficulties which included language barriers.

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7. CONCLUSION

The purpose of this study was to answer the research question exploring whether the behavioural component of increased cultural intelligence affects task performance within international cross-cultural working groups in the realm of intercultural management. The behavioural component of increased cultural intelligence was taken as the behavioural CQ as defined by Earley and Ang (2003), but further extended to behavioural orientations and characteristics, including national cultural dimensions as defined by Hofstede (1983).

Previous studies on cultural intelligence have focused on individual cultural intelligence, but very little work has been done on cultural intelligence on a group level. This research aimed to understand cultural intelligence in a group context in relation to task performance. Jyoti and Kour (2015) found that increased Total CQ improves task performance on an individual level, whilst Adair et al. (2013) found that increased cultural intelligence components in heterogeneous groups increase shared values, which in turn improve task performance.

The core finding of this research is that increased Total CQ on a group level did not increase task performance, however in certain groups, increased metacognitive CQ increased task performance, although increased behavioural CQ did not have a significant effect on results. By performing additional behavioural analysis it was found that specific behavioural characteristics and behavioural orientations (on a national level) influenced task performance, which included Masculinity, small Power Distance, Short-Term Orientation and Indulgence. Behavioural characteristics that affected task performance positively included increased focus on team processes and goals, whilst demographics including increased foreign exposure and gender (female) also increased task performance. Task performance was however decreased by cultural dissimilarity, especially in the light of the orientation of Individualism, as well as communication difficulties which included language barriers.

7.1. PRINCIPLE FINDINGS

The main theoretical aims of this research in terms of cultural intelligence, was firstly to address gaps of the construct itself, with specific focus on the behavioural component, and secondly to understand the contextual and individual differences that may affect

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cultural intelligence. These theoretical aims have been highlighted by Ott & Michailova (2016) as gaps in the current literature on cultural intelligence.

In this study it was found that increased cultural intelligence (Total CQ) on a group level did not increase task performance based on the ranking of results obtained for the project the respondents were part of. The only CQ component that increased task performance was increased metacognitive CQ, and there was no significant difference in the groups' results where they had either increased cognitive CQ, behavioural CQ or motivational CQ. The behavioural component of CQ, especially increased behavioural CQ on a group level, did not significantly effect CQ on an aggregate level.

The argument of Earley and Ang (2003) stating that the individual components can be separated and individually affects total CQ could only be supported in terms of metacognitive CQ and not behavioural CQ. Thomas et al. (2012) stating that behaviour is a necessary outcome was however supported by the fact that the behaviour based on orientation and characteristics had a significant effect on group performance. This also supports the argument of Bücker et al. (2015) referring to motivational and behavioural dimensions of CQ (effective cultural flexibility (ECF)) as being self-conscious adjustment with an action-oriented nature.

Furthermore Thomas et al. (2008) argued that CQ is driven by Metacognition, which was proven in this research as it was the only CQ component that had a significant effect on task performance. This closely associated with the behaviour of individuals as Thomas et al. (2008) compares this to being able to not only adapt but also shape cultural aspects, including their own behaviour.

By analysing the groups' compositions in terms of behavioural orientation and characteristics, it was found that certain demographics as well as other characteristics affected the groups' task performance. In terms of demographics, gender played a large role, namely increased female respondents per group increased task performance, which is in line with the findings of MacNab and Worthley (2012). Furthermore, increased foreign exposure (Ward et al., 2009), classified as the number of continents and countries travelled to, as well as the number of languages spoken, also increased task performance on a group level.

Cultural dimensions, including Power Distance (small), Long-term orientation (focus on short term) and Indulgence, also affected task performance positively. Where groups' compositions consisted of individuals with the above associated national cultural dimensions, their task performance was increased. However, where groups had

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individuals with different orientations in terms of Individualism-Collectivism, task performance was actually decreased. The fact that cultural dimensions as defined per Hofstede (1983) affected task performance adds to the literature gap identified by Ott and Michailova (2016) of how CQ is influenced by context.

The cultural dimension of Masculinity (vs. femininity) also played a role in terms of being less relationship orientated and more task orientated, being able to speak freely, and having a higher goal orientation because of the importance group members placed on the mark achieved in the project. This finding is contradictory to Cheng et al. (2012), who argued that femininity (or relational orientation) has a positive effect on task performance, but this was in an environment where task performance was of a longer term opposed to this study which focused only on short term task performance.

7.2. IMPLICATIONS FOR MANAGEMENT

When management has specific tasks in the form of projects to be performed in intercultural environments involving cross-cultural international groups, the team composition needs to be evaluated carefully. This includes both the structuring of groups, as well as the selection and development of individuals to be able to function in associated groups.

Through this research it was found that the behavioural orientation and characteristics of individuals within groups play a critical role in effective task performance. Although increased CQ in the form of metacognitive CQ does influence task performance, total CQ did not have a significant effect on task performance. When structuring international intercultural groups, it is thus crucial that management evaluate individuals' behavioural orientation, with the knowledge that behavioural orientation can be generalized via national dimensions (Hofstede, 1983), but that individuals may display varied characteristics which could affect group synergies. Individuals earmarked for international intercultural assignments should be able to adapt their behaviour to the specific situation and environment, which can be developed via foreign exposure.

It is however vital that international intercultural groups should have a shared goal and a common or agreeable source of motivation, which could include the success of a specific project or assignment.

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7.3. LIMITATIONS OF THE RESEARCH

The sample selection of this study was very small, thus results could be distorted due to the reliability and validity of the data in terms of the extrapolation of results. Furthermore, national orientations of cultural dimensions were taken from the country comparison available from The Hofstede Centre (n.d.) and not measured in this research. As individual attributes can differ from national attributes, the individual respondents in the working groups studied could have influenced the behaviour of the groups and as such the task performance.

7.4. SUGGESTIONS FOR FUTURE RESEARCH

GROUP CULTURAL INTELLIGENCE

Additional research is still required on cultural intelligence on a group level in terms of the behavioural attributes in the realm of international groups. This research found that the behavioural attributes played a more significant role in task performance than cultural intelligence in a group context, which is in contradiction to previous findings on an individual level (Jyoti & Kour, 2015). Further analysis thus needs to be performed to understand the relationship between individuals' task performance on an individual level and their performance in a group context, which can be performed via triangulation. By understanding the effect of individuals' performance on group performance, the concept of cultural intelligence on a group level can be further defined, as has been originally identified as a gap by Earley and Ang (2003).

One of the principle findings in this study is in relation to Hofstede's (1983) cultural dimension of Masculinity. Although the sample selection in this study consisted mainly of female respondents, the limitation of this finding is reduced by the fact that the Masculinity-Femininity dimension is less varied amongst women than men in societies (Hofstede, 1994). This implicates that the findings in this study are assumed to be applicable to the societies as a whole in terms of females, but it does not necessarily relate to males. Future studies should thus explore more diverse samples in relation to gender.

Although this sample selection is focused on general management students, implying that their professional backgrounds and training may be diverse, it was not analysed in this study. The effect of individuals' backgrounds, not only in terms of their nationality or

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country of origin, but also including education, professional training and industry work experience on their behaviour and associated cultural intelligence should be explored in more depth in future studies.

RESEARCH SAMPLE

In order to investigate the behavioural effect in more depth, it is suggested that future studies include larger sample sizes which can be extrapolated and more rigorous statistical testing can be done. It is also suggested that other nationalities are involved to understand whether the group composition and the associated behaviour of individuals in a group context are limited to the specific nationalities in this study (South Africa, China and The United States).

Due to the fact that numerous respondents were of the opinion that language was one of the major communication barriers, and the assumption that this could have influenced behaviour and associated task performance, it is suggested that future studies are conducted on international groups where the groups have similar native tongues, or if interpreters are available to individuals who have limited language proficiency. By eliminating the effect of language on group performance, a more accurate behavioural analysis can be performed.

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8. APPENDICES

8.1. APPENDIX 1: QUESTIONNAIRE

QUESTIONNAIRE	Project GTMBA	FOR OFFICE USE ONLY	
		SERIAL No	

INTRODUCTION

You are kindly requested to complete this survey based on your experiences of the GTMBA programme's Module 2 *Chinese consulting project only*. This will help us better understand intercultural group work, and should take no more than 20 minutes of your time. Your participation is voluntary and you can withdraw at any time without penalty. All data will be kept confidential. If you have any concerns, please contact the supervisor of this research Dr Tendai Mhizha or the researcher Janita Henning, with the details. Please answer all questions as truthfully as possible. There are no wrong or right answers at all.

_____ _____

SIGNATURE OF PARTICIPANT SIGNATURE OF RESEARCHER

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SECTION1: INDIVIDUAL PERSPECTIVE

Kindly indicate your personal degree of agreement or disagreement with each of these statements. Please mark the most applicable answer with a cross. Please answer all questions. The higher the number the more you agree.

INDIVIDUAL STATEMENTS	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
Q1: I was able to adapt to the way other members in my group worked.	1	2	3	4	5	6	7
Q2: I was able to share my knowledge	1	2	3	4	5	6	7
Q3: I always believed that we would complete the project successfully	1	2	3	4	5	6	7
Q4: I had confidence that my team will be able to work together	1	2	3	4	5	6	7
Q5: I had a positive outlook	1	2	3	4	5	6	7
Q6: I was able to still be actively involved in the group after I experienced something negative	1	2	3	4	5	6	7
Q7: It was important for me to get the work done on time	1	2	3	4	5	6	7
Q8: It was important for me to express my opinion	1	2	3	4	5	6	7
Q9: I tried to convince other team members of my opinion	1	2	3	4	5	6	7
Q10: The mark for the project was very important to me	1	2	3	4	5	6	7
Q11: I was able to talk to everyone in my group	1	2	3	4	5	6	7
Q12: I was able to relate to some other group members	1	2	3	4	5	6	7
Q13: I felt safe to express my opinion	1	2	3	4	5	6	7
Q14: I wanted to achieve the same goals as my team members	1	2	3	4	5	6	7
Q15: I was able to communicate effectively with everyone in my group	1	2	3	4	5	6	7
Q16: I experienced increased stress during the project	1	2	3	4	5	6	7
Q17: I wanted to know what other members' opinions were when they were different from my own	1	2	3	4	5	6	7
Q18: I made a great effort to understand other team members' opinions	1	2	3	4	5	6	7
Q19: It was very important to complete the work successfully	1	2	3	4	5	6	7
Q20: The relationships I built with my group members were very important to me	1	2	3	4	5	6	7
Q21: The success of the project was because of joint effort	1	2	3	4	5	6	7
Q22: I enjoyed working on the project	1	2	3	4	5	6	7
Q23: I tried to make the group work fun	1	2	3	4	5	6	7
Q24: It is important for me to be able to say what I want freely	1	2	3	4	5	6	7

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SECTION2: GROUP PERSPECTIVE

Kindly indicate your personal degree of agreement or disagreement with each of these statements. Please mark the most applicable answer with a cross. This is purely your opinion and there are no right or wrong answers. Please answer all questions. The higher the number the more you agree.

GROUP QUESTIONS	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
Q25: Group team members wanted to achieve success	1	2	3	4	5	6	7
Q26: The team worked consistently on completing the project	1	2	3	4	5	6	7
Q27: Other group members expressed their opinions	1	2	3	4	5	6	7
Q28: The group wanted to perform well in the project	1	2	3	4	5	6	7
Q29: There was clear role expectations of all group members	1	2	3	4	5	6	7
Q30: Team members persevered until the end	1	2	3	4	5	6	7
Q31: There was clear work processes in place in our group	1	2	3	4	5	6	7
Q32: We worked together as a team	1	2	3	4	5	6	7
Q33: There was a natural hierarchy in our group	1	2	3	4	5	6	7
Q34: We had clear leadership in the team	1	2	3	4	5	6	7
Q35: It was difficult to communicate because of different time zones	1	2	3	4	5	6	7
Q36: Various forms of technology available made it easier to communicate	1	2	3	4	5	6	7
Q37: There was more diverse ideas in the group because of intercultural team members	1	2	3	4	5	6	7
Q38: We were able to agree on common values in the group	1	2	3	4	5	6	7
Q39: Everyone wanted to learn from each other	1	2	3	4	5	6	7
Q40: We had a clearly defined goal orientation	1	2	3	4	5	6	7
Q41: The direction of our teamwork was determined more by lecturers than fellow students	1	2	3	4	5	6	7
Q43: Other team members valued my opinions	1	2	3	4	5	6	7
Q44: We looked out for each other	1	2	3	4	5	6	7
Q46: I was able to learn from group members from other countries	1	2	3	4	5	6	7

Q47: What in your opinion was the biggest cultural difference between the three groups?

Q48: What helped the most with task performance in your group?

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Q49: What were the key challenges to work in the group?

Q50: What were the common values in the group – please state 5 words?

Q51: Are there any other comments you would like to make about the intercultural dynamics of your working group?

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SECTION3: DEMOGRAPHICS

Nationality:	
South African	1
American	2
Chinese	3
Other- Please specify	4
Country where you currently live:	
South African	1
American	2
Chinese	3
Other	4
Age:	
20-25	1
26-30	2
31-35	3
>35	4
Sex:	
Male	1
Female	2
MBA Level:	
1st year	1
2nd year	2
Other (Specify)	3
Are you currently employed full-time?	
Yes	1
No	2
Number of years' work experience (in total):	
1-5	1
6-10	2
11-15	3
>15	4

Current position (job title):	
Number of years management experience (in total):	
Junior management	
Middle management	
Senior management	
Size of company you work for (number of	
1-10	1
11-30	2
31-100	3
>100	4
Number of foreign countries travelled to:	
1	1
2-5	2
6-10	3
>10	4
Number of continents travelled to:	
1	1
2	2
3	3
>3	4
Number of languages you can speak:	
1	1
2	2
3	3
>3	4
Client name	
StarTimes	1
Career Dreams	2
ResMed	3
Yanqing Science Park	4
YiJiaFu	5

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SECTION4: GENERAL

Kindly indicate your personal degree of agreement or disagreement with each of these statements. Please mark the most applicable answer with a cross. This is purely your opinion and there are no right or wrong answers. Please answer all questions. The higher the number the more you agree.

GENERAL QUESTIONS	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
Q52: I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.	1	2	3	4	5	6	7
Q53: I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	1	2	3	4	5	6	7
Q54: I am conscious of the cultural knowledge I apply to cross-cultural interactions.	1	2	3	4	5	6	7
Q55: I check the accuracy of my cultural knowledge as I interact with people from different cultures.	1	2	3	4	5	6	7
Q56: I know the legal and economic systems of other cultures.	1	2	3	4	5	6	7
Q57: I know the rules (e.g., vocabulary, grammar) of other languages.	1	2	3	4	5	6	7
Q58: I know the cultural values and religious beliefs of other cultures.	1	2	3	4	5	6	7
Q59: I know the marriage systems of other cultures.	1	2	3	4	5	6	7
Q60: I know the arts and crafts of other cultures.	1	2	3	4	5	6	7
Q61: I know the rules for expressing non-verbal behaviors in other cultures.	1	2	3	4	5	6	7
Q62: I enjoy interacting with people from different cultures.	1	2	3	4	5	6	7
Q63: I am confident that I can socialize with locals in a culture that is unfamiliar to me.	1	2	3	4	5	6	7
Q64: I am sure I can deal with the stresses of adjusting to a culture that is new to me.	1	2	3	4	5	6	7
Q65: I enjoy living in cultures that are unfamiliar to me.	1	2	3	4	5	6	7
Q66: I am confident that I can get accustomed to the shopping conditions in a different culture.	1	2	3	4	5	6	7
Q67: I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
Q68: I use pause and silence differently to suit different cross-cultural situations.	1	2	3	4	5	6	7
Q69: I vary the rate of my speaking when a cross-cultural situation requires it.	1	2	3	4	5	6	7
Q70: I change my non-verbal behavior when a cross-cultural situation requires it.	1	2	3	4	5	6	7
Q71: I alter my facial expressions when a cross-cultural interaction requires it.	1	2	3	4	5	6	7

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8.2. APPENDIX 2: REPOSITORY OF OPEN-ENDED QUESTIONS

Q47: WHAT IN YOUR OPINION WAS THE BIGGEST CULTURAL DIFFERENCE BETWEEN THE THREE GROUPS?	NUMBER OF COMMENTS
Commitment, sense of urgency & work ethic	**7**
Doing the bare minimum and nothing even if there is to be done	1
Levels of commitment	1
Sense of urgency	1
South African students are not able to contribute in a timely manner	1
Team members differed significantly on how they can work together/different work ethics	2
The understanding of what hard work was	1
How opinions are expressed, accepted and respected	**21**
Ability of individuals to voice their own opinions	1
Ability to agree or disagree with people's opinions	1
Americans were less respective of others	1
Americans were open and candid	1
Chinese were very reserved, quiet, they held back	6
Expressing style	1
South African students tend to be authoritarian	1
South Africans and Americans came off as being aggressive at times	1
US students resisted or could not accept ideas or suggestions from other team members	2
US students seem to always want to be right and push their opinion, are very insistent on their way	2
US students were very boisterous	1
US students/members were very outspoken	1
US were more direct and more positive/ open-minded	2
Language barrier, communication	**13**
Communications levels varied	2
Language barrier (communication)	10
Understanding the cultural norms when it comes to communication	1
Other	**17**
Chinese do actual composition while Sa and US prefer the whole logical	1
Cultural differences provide an opportunity to learn each other	1
Different perspectives in related industries	1
Different work background	1
Foreigners are more positive and active	2
How to handle stress	1
It was difficult to establish a good working relationship from the start	1
Job experience	1
None	1
SA students set in the middle of US/Chinese, they were like mediators of the group	1
SA were kind and independent in thinking	1
Status and egos	1
The more we are familiar the more valuable we are	1
The writing portions of the report	1
They were mixed issues, positive and negatives	1
When we think about management the way of thinking is different	1
Grand Total	**58**

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Q48: WHAT HELPED THE MOST WITH TASK PERFORMANCE IN YOUR GROUP?	NUMBER OF COMMENTS
Cooperation	**3**
Cooperation	3
Frequent & clear communication	**8**
Frequent communication/ clear communication	4
Having honest and open discussions between the groups	1
Regular status updates via Skype/WeChat	1
Teamwork /meeting and discussing as a group	2
Friendliness & respect	**6**
Encouragement by foreign students (I am not confident in oral English)	1
Everyone's opinion is highly respected and welcomed	1
Friendly	1
Kind attitude	1
Nice people	1
Showing respect towards each other	1
Other	**15**
Agenda	1
Being present all together in one room	1
Compromise	1
Deep investigation played a more important role with task performance, we can target problems & get practical solutions	1
Having access to resources like internet	1
It should be the aim and confidence which makes us know what we should do	1
Micromanaging	1
Models to use for the project	1
None	1
Only when we met in China did we actually get to do work	1
Some groups wanted to slow down the speaking speed	1
Strong conviction for success	1
The interactive board allowed us to to keep track of our progress	1
There were two members who carried the team, the other delegation did not help	1
Understanding each other	1
Proper task allocation & expectation setting	**5**
Clear allocation, each team member was allocated a task to do	3
Role and expectation management	1
Work division	1
Timelines & time management	**6**
Setting timelines on deliverables	1
Setting up meetings in advance	1
There were deadlines, without deadlines no work would have been completed	3
Time	1
Grand Total	**43**

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Q49: WHAT WERE THE KEY CHALLENGES TO WORK IN THE GROUP?	NUMBER OF COMMENTS
Communication / language barrier	**10**
Communication barrier/ language barrier	9
Talking	1
Different work ethic & associated understanding	**4**
Different work ethics -understanding those of different people	3
Sense of urgency	1
Lack of commitment / trust	**5**
Lack of commitment from team members	3
Lack of trust by some members	1
Not all of the group member were responsive	1
Not being respectful / accepting others' input	**3**
Team members not respective to other team members input	3
Other	**15**
Age and work experience	1
Changes being made to the presentation without the changes being communicated	1
Complete knowledge about the whole project	2
Different carrier backgrounds will challenge the project focus	1
Mental pressure due to time limitation	1
No chance to visit client for more information	1
Project management	1
Students requiring scripts to work with in order to compile a report	1
Students wanting to please the needs of the professor instead of the needs of the client	1
Team members wanting to take care of everything	1
Time limits to hand in reports	2
Understanding the industry	1
US submitting a different report to their professor compared to the rest of us	1
Strong, unbendable / authoritarian personalities	**4**
Baby-sitting strong personalities to avoid project failures	1
Bossy colleagues/ authoritarianism	1
Narrow-mindedness	1
Strong personalities that were unwilling to bend	1
Time & schedule differences	**3**
Coordinating people's various schedules	1
Time differences	1
Working towards different timelines	1
Grand Total	**44**

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Q50: WHAT WERE THE COMMON VALUES IN THE GROUP – PLEASE STATE 5 WORDS?	NUMBER OF COMMENTS
Communication	**5**
Communication	5
Cooperation / collaboration	**1**
Collaboration	1
Cooperation / collaboration / team work	**12**
Cooperation	5
Partner	1
Teamwork	5
Unity	1
Efficiency	**2**
Efficiency	2
Friendliness / friendship / kindness	**10**
Friendly	1
Friendship	3
Helpful	1
Jovial	1
Kindness	2
Nice guys	2
Happiness / fun / positivity	**6**
Fun	1
Happy	2
Positive	3
Hard work	**5**
Hard work	5
Honesty / integrity/ trust	**8**
Honesty	3
Integrity	2
Trust	3
Respect / understanding	**6**
Respect	4
Understanding	2
Responsibility / accountability	**3**
Accountability	1
Responsible	2
Success / completion / perseverance	**14**
Completion	2
Endeavour	1
Output	1
Perseverance	1
Professional dedication	3
Resilient	1
Strong-willed	2
Success	3

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Q50: WHAT WERE THE COMMON VALUES IN THE GROUP – PLEASE STATE 5 WORDS?	NUMBER OF COMMENTS
Other	**27**
Active	1
Allocation	1
Commitment	1
Concentrating	1
Conciseness	1
Contribution	1
Creative	1
Differentiation	1
Executive	1
Express freely	1
High tech	1
Inquisitive	2
Listen	1
Loyalty	1
Meet deadlines	1
Networking	1
None	1
Openness	1
Patience	2
Rebuild	1
Share	1
Steadfast	1
Support	1
Vocal	2
Grand Total	**99**

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8.3. APPENDIX 3: ETHICAL CLEARANCE

Dear Mrs Janita Henning

Protocol Number: **Temp2016-01199**

Title: **How the behavioural component of increased cultural intelligence affects task performance in international intercultural working groups**

Please be advised that your application for Ethical Clearance has been APPROVED.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

Kind Regards,

Adele Bekker

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