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Emotional/Cultural Intelligence and Workplace Diversity: An Investigation of the Relationship Between Emotional Intelligence and Cultural Intelligence in A Multicultural Working Environment. Tamale Technical University as a Case Study.

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DEDICATION:

I dedicate this study to My late Dad, my Mom, Siblings and Close friends.

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LIST OF ACRONYMS

IQ - Intelligence Quotient   **CI** – Cultural Intelligence   **EI** – Emotional Intelligence

CENQ – Culture and Emotional Nexus Questionnaire   **CQS –** Cultural Intelligence Scale

TEIQue – Trait Emotional Intelligence Questionnaire   **S** – Superior Respondents

ST – Subordinate Respondents   **TaTU** – Tamale Technical University

ABSTRACT

As workplaces are increasingly becoming very diverse, with personnel from diverse cultures working in unison as a holistic unit in a multicultural environment, Emotional Intelligence (EI) and Cultural Intelligence (CI) have gained significant attention as key factors that can contribute to effective intercultural communication and collaboration in the workplace. Using Tamale Technical University as a Case, this research aims to investigate the relationship/impact between/on Emotional Intelligence (EI) and Cultural Intelligence (CI) on employee Job Satisfaction and Performance in multicultural organizations.

The research was carried out using qualitative and quantitative research designs. Data was collected using TEIQue SF/360 SF and the CQS/CQS Observer Report. A very brief interview of few respondents was also carried out to ascertain challenges facing employees CI and EI development. Inferential statistics; correlation and regression analysis was used to quantify and analyze qualitative data. Purposive random sampling was used in the selection of respondents to participate in the study.

Findings from this study aimed to explore the relationship that exist between Emotional Intelligence (EI) and Cultural Intelligence (CI) in multicultural(multitrait) organizations, specifically, in a context of a higher institution of learning in developing countries.

Findings show that there is a positive Correlation between EI and CI as well as a correlation between EI/CI and employee job satisfaction & performance. Findings also suggest that EI and CI play a contributory role in employees Job Satisfaction and Performance in multitrait working environments.

RELEVANCE TO DEVELOPMENT STUDIES

The Multifaceted Implication of a research on the role of Emotional Intelligence (EI) and Cultural Intelligence (CI) on employee job satisfaction and performance makes it vital within the field of Development Studies. The world is now increasingly interconnected, hence understanding how EI and CI affect employee attitudes and behaviors holds significant relevance for fostering inclusive workplaces and promoting effective cross-cultural interactions. This research will provides valuable insights into the mechanisms by which these intelligences contribute to job satisfaction and performance, offering a wide understanding of how individuals navigate complex social and cultural dynamics within organizations. This knowledge is crucial in designing strategies and interventions for enhancing harmony in workplace environments, ensuring equitable opportunities, reducing biases, as well as fostering sustainable and inclusive development within diverse organizational settings.

Moreover, within the field of Development Studies, exploring the impact of EI and CI on job satisfaction and performance aligns with the broader goal of creating socially and economically viable environments. By Understanding the influence of these intelligences on employee well-being, teamwork, job satisfaction and productivity, this research offers a pathway to support not just individual growth but also the overall development of organizations and societies. Ultimately, the will aid in fostering inclusive development by emphasizing the significance of emotional awareness and cultural competencies within the workplace and their impact on organizational and societal advancement.

Key words: Emotional Intelligence, Cultural Intelligence, Multitrait Organizations, Organizational Behavior, Diversity, Multiculturalism.

CHAPTER ONE (1)
PRELIMINARIES

1.0 Introduction

The interplay between Emotional Intelligence (EI) and Cultural Intelligence (CI) has begun to emerge as fundamental determinant of employee job satisfaction and performance in numerous workplaces in Africa including Ghana.

The emotional settings within workplaces, which includes employees ability to recognize, understand and manage emotions plays a significant role on employee behaviour, decision-making and job performance (Acheampong A. et al 2023). Similarly, CI, encompassing a person's ability to function effectively across different cultures also matters for employees to perform and be well satisfied at their jobs (Ang S. et al. 2004)

The performance of employees directly impacts the overall success of an organization (K.Mensah et al 2016). Employee Job Performance "is the ability of the employee to combine skillfully appropriate behaviour towards the achievement of organizational strategically determined goals and objectives (Oluwakemi & Olanrewaju 2014; Olaniyan, 1999)". When employees consistently perform well, meeting or exceeding expectations, it leads to overall organizational growth (Adams I. et al 2021). High job performance is often linked to achieving organizational goals, meeting targets, and ultimately contributing to the company's growth and success (ibid 2021). Employee Job satisfaction on the other hand "is how much employees like or dislike their work and the extent to which their expectation concerning work has been fulfilled (Wan E. and Leightley S.L 2006)". When employees are "satisfied with their work", they tend to be more engaged, committed, and motivated, which significantly influences their overall performance and consequently the overall success of the organization (Adowa F.Y & Nichloas C. 2012). Employee who are Satisfied with their jobs are more likely to be loyal, develop the moral to be productive and innovative, thereby making positive contribution to their respective organizations. (ibid, 2012)

Both Job Satisfaction and Performance are vital and fundamental pillars that impact various facets of an organization's functionality and long-term viability. Employees who are satisfied with their roles, compensation, work environment, and opportunities for growth are happier and more likely to perform better. Job satisfaction plays a significant role in employee retention and loyalty ((Adowa F.Y & Nichloas C. 2012). On the other hand, poor job satisfaction can lead to increased turnover, lower productivity, and a negative work environment. *"If I had a better option else where I would leave, but there are no vacancies around"* says one of the study participants at the Tamale Technical University.

Irrespective of EI and CI becoming essential Human Resource Management tools globally, it is not given much attention within the Ghanaian work setting. Only a handful of research has been conduct about the role of EI and CI in Ghana yet they show the relevance of EI and CI in employee job satisfaction and performance. A research carried out by Tagoe, Theophilus & Quarshie, (2016) revealed a "positive correlation between" Nurses "EI and Job Satisfaction" in Accra-Ghana. Similarly Butakor, PK, Guo, Q, Adebanji, AO (2021), also found a positive "causal relationship" between Ghanaian teachers' "emotional intelligence, job satisfaction, professional identity, and work engagement". According to (Acheampong A. et al 2023) EI has a "positive impact on project

performance among employees of construction firms in Ghana". Korankye, B., & Amakyewaa, E. (2021) studied the relationship between "EI and Spiritual intelligence on employee turnover intention and job satisfaction" and their findings highlighted a positive influence of EI on employees working in the "telecommunication industry job satisfaction and turn over intentions". A research by (Dai-Kosi D.A & Acquaye A.V (2020), revealed that culture has a positive impact on Emotional Intelligence development among Ghanaians especially children. It was also found out that Cultural Intelligence has a positive impact on "Interactional Adjustment among Chinese expatriate in Ghana", in a study conducted by (Isaac T. Agyei; Vuyokazi Mtembu 2023) using a sample of 397 Chinese expatriates in Ghana. A study by (Bartels, E 2021) also revealed that workers at the Cape Coast Technical University of Ghana who were stressed emotionally becomes less satisfied with their jobs which makes them perform less efficiently than their colleagues who were less stressed emotionally.

A study conducted by (Jakku, S.Y., Manja , E.K., & Ba –an, M.T. 2022) at the Tamale Technical University(TaTU) revealed that; stress in all forms (employees conflicts, biased treatments, partiality, disagreements etc) has detrimental effects on employees performance and job satisfaction. According to (Goleman D.2011 p. 17) deficiencies in Emotional Intelligence has the potential to cause employee distress, missing crucial deadlines, mishaps and mistakes as well as decrease in organizational productivity. According to the findings of (Jakku S.Y et al 2022) employees of the university job satisfaction and performance are affected when stressed emotionally which leads to low performance and can also bring about mental and health setbacks. This issue of job disaffection among university employees leads to poor job performance which in turns also leads other setbacks in organizational growth. It was also revealed in a research conducted by (Agana A.L 2020) that, cultural and ethnic discrimination, unfavorable policies, "differing aims" and poor management of emotions were some causes of organizational conflicts within the TaTU which causes tension and stress on employees which in turn limits staff job satisfaction levels and performances.

From the above assertions, the role of EI and CI in limiting organizational conflict and fostering employee job satisfaction and performance is proven however it has not received the needed attention in TaTU.

1.1 Organizational Profile

Overview of the Tamale Technical University (can also be found on the university website).

The Tamale Technical University (TaTU) is located in Northern Regional Capital. It is situated within the Educational Ridge of Tamale. Its digital location is NS-011-9772. Established in 1951 as a trades school, converted into a Technical Institute in 1963 and Polytechnic in 1992. It was accorded a "Technical University Classification in 2018 under the Technical Universities Act, 2016 (Act 922)".

The university runs as an autonomous Public Tertiary Educational Institution in Ghana, offering both technical and vocational as well as business and health related courses with accreditation from the National Accreditation Boarded (NAB) with its "Higher National Diploma (HND) programs supervised by the National Board for Professional and Technician Examinations National Accreditation Board (NABTEX)". The University has a total student population of more than 7000 and working staff population more than 500.

Mission

"The mission of the University is to provide higher education and undertake research in engineering, technical and vocational based disciplines using practical and competency-based approach that would produce professionals for industry".

Vision

"The vision of the University is to become an internationally reputable institution of excellence in the provision of technical education".

1.2 Background to the Proposed Study

As a public institution The Tamale Technical University is a 'multitrait' organization, and by 'multitrait' I refer to all the various **(social, political, religious and economic demarcations that encompasses human societies including both intrinsic and learned (externally influenced) distinct behavioral and attitudinal character that are personal and unique to each individual).**

   As a public institution and a place for higher learning, the Tamale Technical University has different stakeholders making it a multitrait and extensively diverse organization from staffs to students. The socio-political, religious and attitudinal diversity has in every respect a significant bearing on the daily interaction of key stakeholders both internal and external and by extension the university entire organizational performance. These singularities and peculiarities among stakeholders of the university has the potentials to causes disagreements among staffs and retaliations from those who felt abused due to their personal, social, political or religious affiliations. It is on the premise of empathy to encourage peaceful coexistence and forestall negative retaliations in a diverse community that Mahatma Ghandi professes his saying "An Eye for an Eye leaves us all blind" and "If we do an eye for an eye and a tooth for a tooth, we will be a blind and toothless nation" says Martin Luther King Jr. This statement echoes the potential effects of retaliation among conflicting parties be it workplaces or homes which can be managed when people are emotionally disciplined. The act of retaliation is something that has long been part of human societies. In my personal experience as an administrative assistant, I have heard colleagues made statements like *"I am waiting for a day so and so letter will come to my office for processing, I delay its processing like they did mine".* In their work (Nozaki Y. and Koyasu M 2013) proclaimed that retaliation can be well managed by emotionally intelligent individuals. They consider emotional intelligence a prosocial trait which can help people manage the psychological states of others. In the same context (Goleman D. 1995) says empathy is built by self-awareness and the more people are mindful of their own emotions, the more experienced they will be in reading others feelings.

   For people to coexist peaceful and contribute productively to organizational growth, there should be some degree of empathy among superiors, superiors to subordinates and subordinates to subordinates which requires a fair degree of emotional and cultural intelligence. It is proclaimed by (Thorndike E. 1920, Mayer and Peter Salovey 1990, Goleman D. 1995, Gorji M. and Gharesefo H. 2011,) that; "individuals with a high rate of EI" are very self-aware and much able to sense the swinging moods or emotions of others, which allows individuals the capability to "appraise and regulate emotions appropriately" (Nozaki Y. and Koyasu M., 2013) and cultural intelligence helps employees to navigate sensitive cultural context amicably (Ang S. et a 2003, Ang S. and Early P. 2006, Gorji M. and Ghareseflo H. 2011, Balogh A. and Gaal Zoltan 2011,).

There are frequent friction among employees of everything organization of which the Tamale Technical University is no exception which greatly pertains to the inability of employees to manage subjective feelings.

According to (Goleman d. 1995 p. 291) "There is no denial to the fact that emotional strengths and social abilities often contribute in leading to social and occupational success". Emotions according to (Keltner D. & Kring A.M., 1998) serve two functions; that is social and communicative functions, conveying a set of information to other people and prompting their reaction which plays an important role in facilitating and building good interpersonal rapport. Individual differ in their abilities to manage their emotions and that of others (Nozaki Y., and Koyasu M. 2011) and this diversity in emotional management abilities is as a result of their respective EI levels (Salovey P. & Mayer J.D., 1990). In this regard the importance and benefits of EI/CI in multitrait organizations for effective Human Resource Management (HRM) and employee co is clearly highlighted.

1.3 Justification of the Study

Cognitive performance is highly influenced by emotional state of a person and people with a good degree of EI is expected to perform better cognitively than others without or with little emotional intelligence (Daamasio A.R, 1999). Emotional control can assist people become very focused on personal development and productivity (Lam & Kirby, 2002). EI is vital to job performance and work success (Vakola M., Tsaousis I., & Nikolaou I., 2004) and a significant leadership trait (Cooper R. & Sawaf A., 1997). EI plays a significant contributory role in effective multicultural negotiations which is relevant for organizational and inter-organizational correlation (Adler N. 2008).

Globalization has opened up national borders, making it possible and easy for organization to source for diverse personnel globally. This globalization process in the words of (Friedman L.T 2005, p. 11) has "flattened the world" closing the gaps among people of diverse cultures empowering them by "making it possible for different people to "plug and play". This diversification presents a unique phase of multiculturalism and the means of effective management of cross-cultural interactions to propel organizational goals becomes a needed HRM factor in organizational culture. It is however noted by Friedman L.T that the globalization process doesn't come without frictions. The cause of these frictions according to (Iacobb D. and Dumitresu M.V., 2012) is what they termed the "cultural wall" which surrounds people, groups and nations. They further stated that though globalization is eroding these walls, it is posing complex challenges to different values, cultures and national identities. In order to safely and cautiously manage these "cultural walls" that surrounds employees, organizational stakeholders need to be culturally competent, aware and sensitive, i.e. be 'culturally intelligent' (Ang S. and Early P. 2003, Ang S. et al 2004, Ang S. et al 2006, Iacobb D. and Dumitresu M.V., 2012).

Emotional Intelligence enables organizational managers and employee to be aware of their emotions and that of others (Salovey P. & Mayer J.D., 1990, Goldman D. 1995, Cooper R. & Sawaf A., 1997, Daamasio A.R, 1999, Lam L. & Kirby S., 2002, Vakola M., Tsaousis I., & Nikolaou I., 2004, Adler N. 2008, Nozaki Y., and Koyasu M. 2011, Serat O. 2017) and Cultural Intelligence offers them the ability to interact cross-culturally devoid of biased cultural discriminations (Ang S. Earley P. 2003, Ang S. et al, 2006, Ana, A. 2018, Shakeel A. and Saidalavi K. 2019,) and both social constructs together

creates a conducive and enabling environment for workplace diversity, employee growth, job satisfaction and general organizational progress.

Based on the above assertions and for the fact that there is relatively very few emotional intelligence and cultural intelligence research conducted (Yitman I. 2013) especially in developing countries and in tertiary educational on employee job satisfaction and performance for that matter, there is relatively limited literature and this study will serve both as a source of literature for future studies as well as reveal the correlation between emotional intelligence(EI) and cultural intelligence(CI) in organizational performance and employee job satisfaction in multitrait organizations.

1.4 Statement of the problem

The Intelligence Quotient (IQ) for several decades was considered the ideal and only essential indicator of employee resourcefulness guaranteed for excellent job performance. However, it is not uncommon to see individuals with very high IQs finding it difficult to meet organizational goals because of their inability to manage a team. Its proven by numerous studies that, Emotional Intelligence and Cultural intelligence significantly influences employee performance and organizational leadership abilities. As (Aydin, Leblebici, Arslan, & Oktem, 2005) opined; individuals who are highly intelligent emotionally shows better personal progress and professional development than those who only possess high Intelligence Quotient (IQ). Rapid globalization has shrunk national boundaries, bringing into contact diverse social and cultural identifies, this has made emotional and cultural intelligence an essential skill to aid proper and culturally sensitive communication among individuals at work, home and place of business. Universities and other places of learning are grounds of intellectual prowess, battling in constant competition and display of intellectual achievements as well as their ability to logically process and solve questions. However, no provisions are made to orient employee and train students the means of becoming culturally and emotionally intelligent which contemporary have been identified as valuable professional and leadership qualities.

Cultural Intelligence and Emotional intelligence have an intertwined relationship and their significance to general organizational performance is proven. However, in the case of the Tamale Technical university and many other organizations Cultural Intelligence and Emotional Intelligence are both not given any significant attention.

1.5 Research objectives and questions

1.5.0 Objective of study

The objective of this research was to conduct a study on the topic of emotional intelligence and cultural intelligence in a 'multitrait' institution and by so doing producing empirical findings that answer the study research questions and either prove or disprove the proposed hypothesis highlighted in this study.

Hence the objective of this study was to investigate and explore the role and relationship between emotional intelligence and cultural intelligence, their relevance to employee job satisfaction and performance.

1.5.1 General Research Question

How do Emotional Intelligence (EQ) and Cultural Intelligence (CI) influence Employee Job Satisfaction and Performance in The Tamale Technical University?

1.5.2 Specific Research Questions

i. What is the Relationship between individuals EI and CI in multitrait organizations like Tamale Technical University?

ii. What Impact do EI and CI have on Employee job Satisfaction and Performance in Tamale Technical University?

iii. What are the challenges and barriers that impede the development of emotional intelligence and cultural intelligence among employees in the multicultural environment of Tamale Technical University?

iv. What is the level of emotional intelligence and cultural intelligence among superior and subordinates in the Tamale Technical University?

1.6 Study Hypothesis

The following were the research hypothesis put forward in this dissertation;

i. *NH1:* CI has no relationship with an individual's EI and vice versa.

 RH1: CI has some relationship with an individual's EI and vice versa.

ii. *N2:* EI and CI has no correlation with employee Job Satisfaction and Performance.

 RH2: EI and CI has some correlation employee Job satisfaction and Performance.

1.7 Limitation of The Study

This study was limited by time and finance. As a result only a few number of participants were selected for the study. This by extension has some impact on the findings of the research in terms of sample-population representativeness and findings generality

CHAPTER TWO (2)
LITERATURE REVIEW

2.0 What is Intelligence?

The Term 'Intelligence' in the words of (Sternberg R. J. 1986) has "many definitions as there are experts to define it" and he defined it as "the mental activity involved in purposive adaptation to, shaping of, and selection of real-world environments relevant to one's life" (ibid p.33). According to (Hand M, 2007 p. 36) to be intelligent is to "have an aptitude for theory-intensive activities" not competence in 'perfect executions of specific' task as (Ryle G 1949, p. 36) puts it. So, a person can still be considered intelligent even if they are not perfectly competent in executing a specific task. Intelligence as a cognitive ability varies among individuals (Hindes Y., Schoenber R.M & Saklofske H.D 2011) which shows that there are degrees in levels of intelligence.

So, we will maintain that intelligence and what it means even if fluid with a series of emerged connotation does not make it original meaning elusive, therefore in this study intelligence is "the mental activity involved in purposive adaptation and shaping one's environment in a beneficial manner" (Sternberg R. J. 1986), the "ability for theory intensive-activities" (Hand M. 2007) and "ability to achieve goals" (Legg S. and Hutter 2017) in different situations. The keyword that resonates among all the definitions is 'ability(aptitude)' 'understand', 'logic(reason)', 'adaptation/shape' and 'goal-oriented'. So therefore, in this study Intelligence is;

'the ability/aptitude of any living being(person/animals) or non-living being (AI technology) i.e., agent(s) to reason, understand, shape, adapt and being able to use this knowledge efficiently in decision making process to achieve stipulated goals in diverse environments'.

2.1 Intelligence Quotient (QI)

The etymology of the word 'Quotient' comes from the Latin word 'quot' or 'qoutiens' which means (how many, as many or how often). In arithmetic the word 'quotient' means how many times a number is divisible by another number. The Collins English Dictionary therefore defines Quotient as "indicating the presence or degree of a characteristics in someone or something". It is defined by (Louise D.M and Bruno S. 2017, p1) as the "quantitation of an individual's intelligence relative to peers of similar age". It is a measure of "intelligence that takes into consideration a child's mental and chronological age" (Bearce, K.H 2009 Ch 8, p.1). IQ test is used in schools to admit students by categorization (Hand M, 2007, Louise D.M and Bruno S. 2017, Adebayo O.G & Yamoskiy V.R 2022), used in the military and government security agencies to recruit personnel (Argamo S., et al, 2009).

Hence; Intelligence Quotient (IQ) can be simply defined as

'he quantification of the degree of intelligence present in a person/non-human animal'.

To (Gottfredson 1998, p.24) IQ test is the "single most effective predictor known of individual performance at school and on the job, as well as many other aspects off wellbeing." This assertion by (Godttfredson, 1998) is rather what this study seeks to avoid, the postulation of IQ as the 'single' "most effective indicator of high performance" in social and working environments. This leads to the discussing of the two social constructs Emotional Intelligence (EI) and Cultural Intelligence (CI) as two vital alternate predictors of personal and professional performance.

2.1 Emotional Intelligence (EI)

As organizations become more diverse and *'multitrait'*, understanding the dynamics of emotions and culture in the workplace has become a vital area of research. For individuals and organization to strive in today's globalized world, it has become critical for employees to effectively manage emotions, understand and navigate cultural difference and adapt to diverse workplace environments and individuals. According to (Gareth Chick 2018, p. 1) Managers and corporate heads often developed unconscious controlling habits and yet are in constant denial that these bossy attitudes often lead to "collective shortfalls in human potentials" which results in unsustainable and poor results. It is asserted by (Brown R. and Brooks I 2022) having a detailed grasps of one's emotion and that of others is an essential factor in organizational growth which in the same context is reiterated by (Mayer et all 2004) that; effective organizational mood management is needed by top management and executives to promote the achievement of organizational goals which involves using a blend of multiples psychological skills i.e. (emotional intelligence).

The EI concept is a recent behavioral framework that was publicized by the works of (Goleman D. 1995) in his book *"Emotional Intelligence: Why It Can Matter More Than IQ"*. EI roots according to Serrat O. can be traced to Charles Darwin's work *"The importance of emotional expression for survival and adaptation"*, Mayer and Peter Salovey work in 1990. However, (Goleman D. 1995) attributed Thorndike E. (1920) with the early study of emotional intelligence. Emotional Intelligence (EQ) describes the capability or self-perceived ability and skills to identify, analyze and "manage the emotions of one's self and that of others" or group (Serrat O., 2017, p. 330.). Goldman D. dissected the concept of Emotional Intelligence in to five (5) dimensions;

  a. ***Self-Awareness:*** This involves being able to recognize and understand your own emotions, motives, strength as well as weakness.
  b. ***Self-Regulations:*** This refers to an individual ability to be able to effectively manage and regulate/control their emotions.
  c. ***Self-Motivation:*** It is about being able to push oneself through obstacles with strong optimistic conviction and perseverance to reach a goal.
  d. ***Empathy:*** To feel, understand and share the emotions of others is to have empathy.
  e. **Social Skills:** This is the skills to be able to manage and associate with other people.

EI is the ability to make use of social knowledge to adapt and act accordingly in different social context (Salover P. & Mayer J., 1993). As part of formulating a new emotional intelligence concept, (Salovey J. & Mayer P. 1997), proposed four interrelated units of emotional intelligence;

Salovey and Mayer (1997) Four Dimensions of Emotional Intelligence
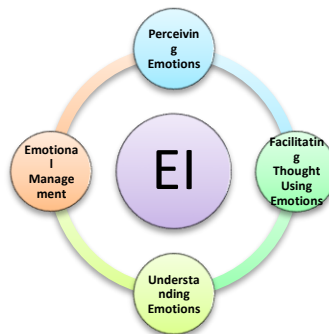
a. ***Perceiving Emotions:*** This pertains to people ability to accurately decipher emotional signals on people faces, voices or pictures (Papadogiannis P.K et al 2009).
b. ***Facilitating though Using Emotions:*** When emotions facilitate the kind of thought people conceive in their minds (Marina F. & Ashley M.V, 2017).
c. ***Understanding Emotions:*** According to (River S.E et al, 2007) it pertains to the ability of an individual to comprehend and make meaning between diverse emotions and how such emotions change with time and situations.
d. **Emotional Management:** It is about the ability of regulating one's emotions and effectively regulating also the emotions of others. (Marina F. & Ashley M.V, 2017). It involves the ability to be able to manage emotions in an effective manner be it negative or positive and formulating quick effective responses to suit any situation (River S.E et al, 2007).

EI has long been linked to various positive outcomes in school and at the workplace, such as good academic achievements (Parker J.D, et al 2004, Van Der Zee K., et al 2002) good leadership skills (Cooper R. & Sawaf A., 1997, Sharma T. and Sehrawat A. 2014), improved job satisfaction and teamwork (Vakola M. et al 2004, Sharma T. and Sehrawat A. 2014), enhanced performance and management of occupational stress (Bar-On R. Kirkcaldy B.D & Thome E. P., 2000, Nikolawu I. & Tsaousis I. 2022) as well as reduced negative job site retaliation (Nozaki Y, Koyasu M. 2013). In the words of (Dulewicz V., & Higgs M., 2003) the higher an individual ascends the cooperate ladder the more emotionally intelligent they need to be. EI plays a crucial role in determining organizational leaders and subsequent employees' performance and organizational success than intelligence Quotient (Diggins c., 2004). In their research (Nozaki Y, Koyasu M. 2013) acknowledged that; emotionally intelligent people are able to influence and regulate others emotions so that they act rationally. Individual Emotions are like elastic bands with varying elasticity, it is likely to snap when stretched beyond its endurance level.

As Intelligence is a cognitive ability of logical reasoning for the purpose of influencing goal achievement in one's environment, Emotional intelligence is

'the innate or learned ability of cognitively processing, appraising and reacting to varied behaviours/actions of diverse individuals in a strategic, purposive and well calculated manner to achieve a goal(s)'.

2.4 Cultural Intelligence

Contemporarily, globalization has extended "global cultural networks" increasing the size and impact of "global interconnectedness" which are all characterized by interactions from varied actors (Held D., & McGrew A., 2007). This complexity and intersections of diverse cultures be it in organizational or non-organizational settings requires a form of skills or experience to be able to smoothly navigate these cultural differences i.e CI. The Cultural Intelligence (CI) concept was first proposed by Dr. Soon Ang and Dr. Linn Van Dyne in the late 1990s and popularized by their book titled *"Cultural Intelligence: Individual Interactions Across Cultures"* published in 2003. Having knowledge of culture allows us as individual to navigate in great precision the complex 'cultural web'. In the words of (Gopalkrishan N. 2014) while interacting with different cultures can "lead to greater opportunities or positive change in all aspects of human life, they can also lead to conflict between cultures, whether overt or covert".

CI is defined by (Early P. & Ang S., 2003; Ang S. et al 2007; Ang S. & Van Dyne, 2015) as the "ability of an individual to effectively" interact/deal with diverse cultures. According to (Early P. & Ang S., 2003) CI is made up of four interrelated units of skills/abilities and these four dimensions of CI according to (Azevedo A., 2018, p. 1) "meaningfully complement each other to support behavioral flexibility within cross-cultural settings".

  a. **Cultural Intelligence Drive (CI drive):** It is the passion or motivation and interest to engage with diverse cultures. CI drive reflects a person willingness and curiosity to experience, learn, sample and even adapt to different cultural settings.
  b. **Cultural Intelligence Knowledge (CI knowledge):** This pertains to actively seeking for factual knowledge of diverse cultures; to enable an individual understand the norms, values, traditions, beliefs and practices, modes of communication, trading strategies, etiquettes etc. of different cultures.
  c. **Cultural Intelligence Strategy (CI Strategy):** It is the ability of an individual to synchronize their behaviour and communications patterns and styles almost instantaneously to fit the cultural context of cultures they chance in their daily interactions.
  d. **Cultural Intelligence Action (CI Action):** It is the capability to act in an appropriate manner during a cross-cultural interaction.

Managing cross-cultural relationships using cultural intelligence(CI) is said to be a key global leadership factor (Ahmed S. and Saidalavi K., 2019). Leaders need to master diverse intelligence including emotional and cultural intelligence (Templer K. J., et al 2006). CI has been deemed a critical factor in managing diversity in the workplace (Ana A. 2018, Ahmed S. and Saidalavi K., 2019,), fostering an inclusive, cross-cultural organizational interaction (Herrman E., et al 2007, Ahmed S. and Saidalavi K., 2019). The importance of cultural intelligence in proper organizational management is further reiterated in the work of (Yitman Ibrahim, 2013). In his study (Yitman I. 2013) asserted the importance of cultural intelligence in enhancing the comparative advantage of multinational cooperation who are culturally inclusive, promoting cross-cultural learning and integration than their counter parts who do not. He further stated that cultural intelligence allows effective integration of MNCs in various countries across the globe.

Individuals with high CI are deemed to have "strong mastery and sense of emotional display and physical presence" (Earley et al., 2006, p.34). CI as explained by (Van dyne et all 2012) refers to the ability of a person to effectively manage and interact in a cross-cultural setting be it at International, National, ethnic or organizational level. Hence, Cultural intelligence is therefore;

'a learned' ability of associating and interacting with diverse cultures effectively through strategic maneuvering of cultural differences in different multicultural settings even when such values and norms do not conform to one's personal cultural beliefs'.

2.5 Emotional Intelligence and Cultural Intelligence Conceptual Framework

Probing deep into Emotional Intelligence (EI) and research conducted over the years reveals a pattern of the emotional processing cycle. This study therefore develops a six-step emotional processing cycle. It Further illustrated with a conceptual framework on how CI and EI affects employee job satisfaction and performance.
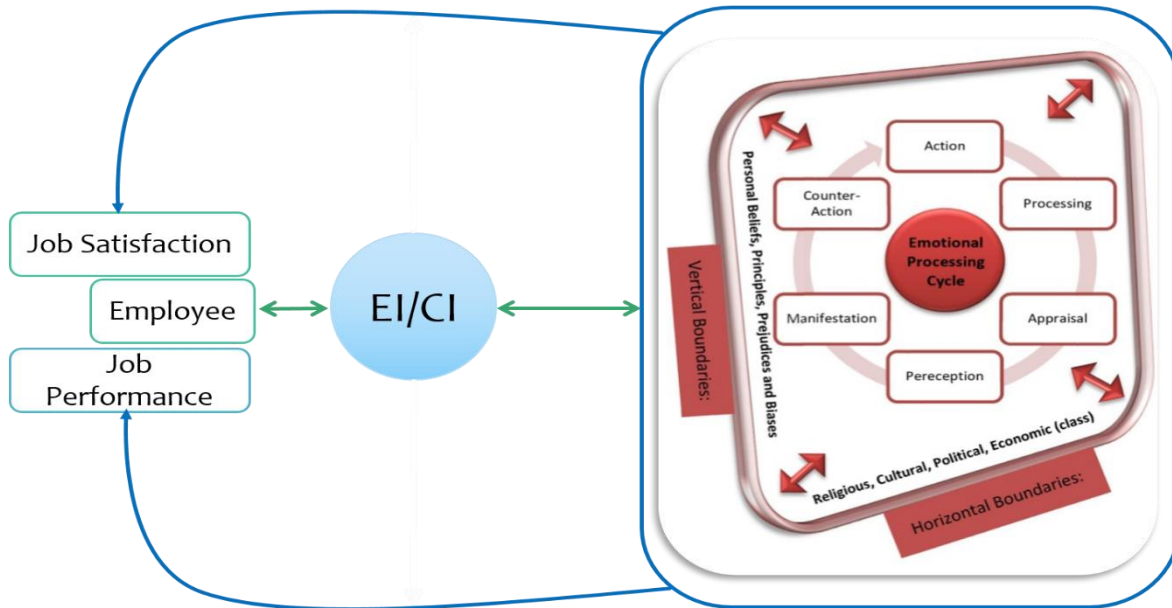
Action- refers to the gestures, verbal or non-verbal acts that an **'action doer'** acts to an **'action recipient'**.

Processing- This is the cognitive task of quickly processing the action to determine if it is negative or positive act, like insult, compliment or disrespect.

Appraisal- This is the potentials judgments made from the cognitive processing of the action. The judgment of the action could be that it is positive act or a negative one. A compliment or an insult.

Perception- This is the notion or idea the action recipient now hold of the action based on their judgment of the action. This is the point an emotion is developed, it is either that of empathy, happiness, disdain, anger, confusion etc. If the act is perceived a negative one the action recipient could develop an emotion that of anger.

Manifestation: This is the physical or visible exhibition of the perceived emotion. Now it becomes visible on the person face, action, tone or behaviour i.e. their emotional status. This shouldn't be confused with (Salovey and Mayer, 1997) "perceiving Emotions" which is recognizing and being able to tell the emotional state or mood of people via the physical expression or tone of their voice etc. In the Case of Salovey and Mayer Perceiving emotion is seen at a second person's activity but in this framework, it is viewed as the first person's activity***. It is what happens in a person's mind.***

Counter Action: - This is the reaction of the action recipient to the action doer, based on the perception and manifested emotion. If the manifested emotion is that of anger, they can either react and retaliate angrily or remain calm (the basis of emotional intelligence).

Cultural, Religious, Economic and Political boundaries: These are the socially constructed external boundaries that influence and shape how people react to different actions. For example, when an action doer from a low context culture says or do something, it can be **OK** culturally and **won't** be offensive to his peers of the same culture hence, no emotional response is exhibited to the action, no frowning, no sadness yet if the same action is executed in high context culture society, the

cultural boundaries is crossed and individuals become offended and their emotions become visible, that of anger or sadness. And it is the same with the boundaries of Religion, Politics etc.

Personal Beliefs, Principles and Biases (personal traits): This are the innate boundaries that are unique to individuals even if they belong to the same socially external constructed boundaries. To simply put the personal traits/principles are those innate qualities that set people apart even if they are siblings, from the same culture, political party, religion etc. However, it is to be noted the some of these personal principles can be picked up by a person from the role models and mentors they look up to.

This conceptual framework allows us to understand the relationship that exist between Emotional Intelligence (EI) and Cultural Intelligence (CI) and the means by which they mutually influence each other and employee job satisfaction and performance.

Possible criticism of this framework of emotional processing may arise from critics who will consider emotions a non-conscious act that does not involve any cognitive information processing. Yet Scholars like (Hand M, 2014, Fiori M, 2009; M.V Antonakis 2012; Fiori M. & Vesely-Maillefer K.A 2017) agree that activities that occur in our subconscious mental faculties and appear to be spontaneous act devoid of any prior thoughts and planning doesn't mean that there is no cognitive activity, it is however unpredictable like in the case of conscious emotional behaviours. (Fiori M. & Vesely-Maillerfer K.A 2017) divided emotion into two; Conscious emotional Behaviour and Non-conscious Emotional Behaviour.

2.6   Review of Emotional Intelligence (EI) and Cultural Intelligence Scales

2.6.1 The Emotional Quotient Inventory "BarOn EQ-i /EQ-I 2.0 scale and EQ 360"

The EQ-i 2.0 is the revised and latest modification of the BarOn EQ-i, is one most popular emotional intelligence assessment tool, it received praises for its validity and reliability by the Washington Post (Bradberry T. & Greaves J. 2009) as an Ideal EI Measurement Scale. The EQ-I 2.0 is a self-report questionnaire made up of 15 sub thematic scales each grouped under the following compound thematic scales; *Self-Perception, Self-Expression, Interpersonal, Decision Making and Stress Management.*

2.6.2 The "Wong and Law emotional Intelligence Scale"

The "Wong and Law Emotional Intelligence Scale or (WLEIS)" was developed by Wong and Law (2002) to do a brief assessment of emotional intelligence (EI) and it is highly rated as one of the most valid and reliable emotional intelligence scale suitable for EI measurement at workplaces.

2.6.3 The "Schutte Self-Report Emotional Intelligence Test (SSEIT)"

The "Schutte Self-Report Emotional Intelligence Test (SSEIT)" is another emotional intelligence measurement scale which was constructed from the works of (Salovey and Mayer 1990). It is also divided in to four emotional thematic areas, that is; "emotion perception, utilizing emotion, managing self-relevant emotions and managing other people emotions". It is made up of 33 self-report question. The SSEIT was used in Emotional Intelligence (EI) test in various disciplines and fields (EI) by different scholars like (Angayakanni R. & Raja S.M.A 2016; Arunachalam and Palanichamy, 2017) in South Africa, it was used by (Jonker C.S & Vosloo C., 2008) in south Africa) who all confirmed the reliability and validity of the SSEIT.

2.6.4 The "Trait Emotional Intelligence Questionnaire (TEIQue Long/Short Form)"

This EI inventory was developed by Petrides K.V and Furnham A. in 2001. It conceptualizes EI as "personality trait" (O'Conor J.P et al, 2019). The TEIQue is in two categories, the TEIQue Long form and the TEIQue Long Form. The Long form is a 153 self-report questionnaire subdivided into four (4) sections containing 15 facets while the Short form is condensed into a 30 item under the four main subsections. The scale has an additional 360 scale for measuring emotional intelligence of an individual from a different person perspective. It has both long and short form. It is considered one of the most practical trait EI measurement scales and have been used in more than 2000 academic and professional research projects (O'Connor J.P et al; 2019) and was adopted for this study.

2.6.5 The "Cultural Intelligence Scale (CQS)"

There is only one dominant scale for cultural intelligence measurement, that is the one created by Ang and his colleagues in 2004. It was pilot tested with about 1,500 participants of varied samples and later replicated in another study by Soon Ang and 5 other colleagues in 2007 and proved to be consistent, reliable and valid. Hence this scale is readily available in Ang et al 2007 Appendix and was adapted as the scale for measuring and testing the CI of study sample of the Tamale Technical University.

CHAPTER THREE (3)
RESEARCH METHODS AND METHODOLOGY

3.0 Research Design

A descriptive design was used for this study. It is an ideal approach for collecting both qualitative and quantitative data. Survey questionnaires, brief interviews and secondary sources was employed as data collection instruments.

According to (Panke D, 2018, p.1) the nature of a research question and hypothesis shows the kind of research design to use. Research questions that sought to explain causal-effect mechanism about social concepts which already have existing literature and theories of explanation even if the pending research is to explore same concepts and topics in un-researched scope, the study is deductive and hence an explanatory research design is the most fitting research design model to use (Panke D. 2018, p.1). An explanatory research design uses both qualitative and quantitative design (ibid 2018, p.1). To quote him verbatim

"Whenever a research question relates to a phenomenon that has already been studied (albeit with a different focus) by other scholars, it is very likely that there are already theories that relate to a question/phenomenon of interest. Thus, in such situations, it is a good idea to opt for a deductive rather than inductive research design (ibid 2018 p.2)."

The topic at hand has extensive literature and many behavioural/social theories. As (King et al 1994b, Bryman 2008, Creswell 2014,) proclaimed; research designs for deductive studies are theory based in nature. This study will therefore, adapt the deductive-explanatory research design with a focus on qualitative data. Taking cue from diverse existing literature and theories, of emotional intelligence and cultural intelligence, the focus of this study will be to explore the relationship that exist between CI and EI and how this relationship shapes or influences organizational behaviour, management, job satisfaction and performance of employee (superior and subordinates), in tertiary educational institutions with a focus on Tamale Technical University located in a typical multi-ethnic and culturally centered vicinity of Tamale, Northern Region of Ghana.

3.1 Cultural Intelligence Scale (CQS) and The Trait Emotional Intelligence, 360 Test-Short Form (TEIQue-SF & TEIQue-360-SF)

The Trait Emotional Intelligence Questionnaire/360 Test-Short Forms (TEIQue-SF & TEIQue-360-SF) developed by (Petrides K.V and Furnham A.; 2001) and Cultural Intelligence Scale (CQS) developed by (Early C. & Ang S, 2003) was deemed the ideal EI and CI Scale for this research. Different research in cultural intelligence in various fields have been conducted using CQS by (Ang S. et al 2003) resulting in claims that back its reliability and validity after several repetitive administering. The cultural Intelligence scale has been rated high in its reliability and validity even in cross-validation across different countries (Ang S. et al., 2007, Caterina G. & Diletta G; 2018). Psychometrically it is rated satisfactory (Barzykowski k. et al, 2019). The (TEIQue-SF & TEIQue-360-SF) has been deemed reliable and valid trait-based EI scale (Andrei F., et al 2016 and O'Connor J.P et al; 2019).

However, all self-report questionnaires are criticized as having the tendency to give biased and self-praise responses. As (Brackett et al 2006, Sheldon et al 2014) puts it, *individuals are not ideal judges of their own emotional traits*. "Self-report trait-based measures" are perceptible to faking (O'Connor J.P et al; 2019). So, key employees were randomly picked and administered the 360 to rate the emotional

intelligence of their respective superiors and a response comparison was generated and matched to identify discrepancies in self-report by superiors. It is however asserted that faking in trait-based self-report questionnaire only occurs when individuals or employees feel unsure of the confidentiality of their responses especially from their superiors or colleagues (Tett R.P et al 2012). So, the confidentiality of participants was deemed a high priority, hence, identities were treated with outmost anonymity.

3.2 Data Collection

Data for this research was gathered via primary and secondary sources. The primary data was collected using The (TEIQue-SF & TEIQue-360-SF) to collect data on EI and the Four Factor Cultural Intelligence Scale (CQS) was used to collect data on CI and CENQ to collect demographic and other data. Relevant Secondary data, served two purposes, first as a yardstick for comparing study findings as well as providing in-depth literature about the topic at hand.

3.3 Research Instrument

The main research instrument that was used in this research is questionnaire administration via the TEIQue-SF/360 and CQS/ Observer report and CENQ as well as brief interviews.

3.4 Sample populations

The study population for this research is made up of diverse employees of the Tamale Technical University, from the Top management position, administrative staffs, labourers and security guards, lecturers and students of the university. Statistical data found on the university website shows that, the university has a total population of more than 7500, with 7000+ being students' population and the 500+ employees of various ranks. From this population, suitable samples were selected using purposive random sampling technique as the first phase of sample selection.

3.5 Sample Technique and sample size determination

From the population, samples were selected using purposive random sampling procedures as this is suitable for gathering participants that best fits the research aim. The University has 8 faculties with 202 lectures of various ranks and total administrative staff of 249 working in various offices and departments of the university. The Slovan's formula (1978) was used to determine the minimum sample size for the study.

$$n = \frac{N}{1 + Ne^2}$$

Where   n = Sample size

             N = the population size

             e = level of significance, fixed at 0.05

So our total population for consideration is 451

$$\textbf{Hence; } \boldsymbol{n} = \frac{451}{1+(451)0.05^2} = \frac{451}{2.128} = 212$$

Therefore, with a marginal error at 5% and Confidence Level at 95%, 212 samples consisting of both lectures and administrative staffs is the ideal sample size (n) for this study, however 30 samples will be used due to the limitation of time and money.

3.6 Purposive Random Sampling Technique

Interviews, Emotional and cultural Intelligence inventory scales was administered in a purposive-random fashion to study participants. Purposive sampling is a sampling procedure to select study participants who fall within certain characterization needed for research (Sproull N.L 1995, 113). So, participants were identified and purposively selected based on their suitability to offer more insight into the study topic. Sproul furthered stressed that is of prominence in purposive sampling to ensure maximum variation (ibid, p.113), that is widening the selection frame to choose samples who possess traits beneficial to the study. According to (Amin M.E 2005) opting for purposive random sampling techniques is generally known for reducing participant selection bias as well as attaining some relevant degree of validity and reliability.

It was however relatively impossible to **select 212 participants** to study due to financial and time constraints. So the sample size was reduced to a minimum of 30 participants which is widely recognized by many scholars as the most minimum sample ideal for undertaking research (Corder G.W & Foreman D.I, 2009) as well ensuring maximum variation (Sproul N.L 1995) and a high degree of confidence in research results. As a result, Faculty Deans, Head of Departments (HODs), Director of Quality Assurance Directorate and Director of Business Development and their office assistants were purposively selected to participate in the research.

3.7 Data Analysis

Data analysis was carried out using descriptive and inferential statistics. Demographic data were analyzed and presented using descriptive statistics, i.e. frequency and graphs. To determine correlation, causality and effect, linear regression was used. The IBM SPSS Statistical Software Version.28 was used to analyze collected data.

3.8 Validity and Reliability

3.8.1 Validity

Validity of a test is determined by its ability to measure the phenomenon it is designed to measure (Panke D. 2018, p23). All data collection tools were thoroughly scrutinized to ensure that they contain all relevant information and questions capable of answering the research questions and fulfilling the study objectives. It is asserted by (Panke D. 2018, pp. 23-34) that internal validity is achieved when the research is design in a systematic manner by which means empirical, methodological and theoretical answers to the research questions is achieved. External validity pertains to the potential of research findings to be generalized to other populations outside the study scope (ibid 2018, p24).

To ensure the validity of instruments used to collect data, the researcher must go through each data collection instrument against the study objectives and Research Questions making sure that the variables contain all the information that fulfils the Research Objectives and Questions.

3.8.2 Reliability

According to (Panke D. 2018, p.24) reliability is defined as "the consistency of measures used and is often deemed as 'measurement validity'". Reliability is the ability of indicators and measurement parameters generating same results in a repeatable, consistent and stable manner irrespective of the place, time and participants. Reliability of data and findings was measured using previous existing

literature on the topic as control, this according to (Mugenda O.M and Mugenda A.G 1999) proves the validity and reliability of research instruments used in a study. The Cronbach's alpha was used to measure internal consistency.

3.9 Ethical Considerations

This research strictly adhered to all research ethics, from participants consent seeking to the confidentiality of their response in this research. This research is strictly for academic purpose and was not shared with the study organization or any stakeholder related to it. All relevant sources for data, literature and evidence are duly referenced and no form of plagiarism was condoned.

CHAPTER FOUR (4)
ANALYSIS, INTERPRETATION AND DISCUSSION OF FINDINGS

A total of 30 participants took part in this study. Participants were selected using both purposive non-random sampling and purposive random sampling techniques. Sample of selected superiors (10) and subordinates (20) were purposively selected. 10 males and 10 females subordinates were randomly selected to serve as the respondents of the TEIQue 360-Short Form and CQS observer report of subordinates.

Out of the 10 selected superiors, 5 Deans of various faculties were selected out of which 1 was a female, 2 directors, 3 Head of Departments (HODs). The 10 superiors and 20 subordinates were administered "The Culture and Emotion Nexus Questionnaire (A Questionnaire developed for the sole purpose of asserting the relationship between culture and emotions and employee job satisfaction and performance). TEIQue/360 Short Form has a total of 30 emotional intelligence scale questions, The Cultural Intelligence Scale (CQS)/ observer report has a total of 20 questions and The CENQ form has a total of 20 questions. Like the TEIQue and CQS scales the CENQ was also developed with Likert-scale responses. Data collection took a total of 30 days afterwards, the data were collated and digitize using the IBM SPSS v.28 statistical software for analysis.

A prelude assessment of the IBM SPSS software was conducted using demo responses to each variable of the TEIQue SF & 360 SF, CQS, CENQ, this was done to expose and correct possible errors which may impede the psychometric integrity of the collected data.

4.0 Demographic Data Of respondents

Table 1.0: Gender Distribution of Respondents

Gender	Frequency	Total (%)
Male	19	63.33
Female	11	36.67
Total	**30**	**100.00**

Source: Field Survey, September 2023

Figure 1.0: Pie chart of respondents gender
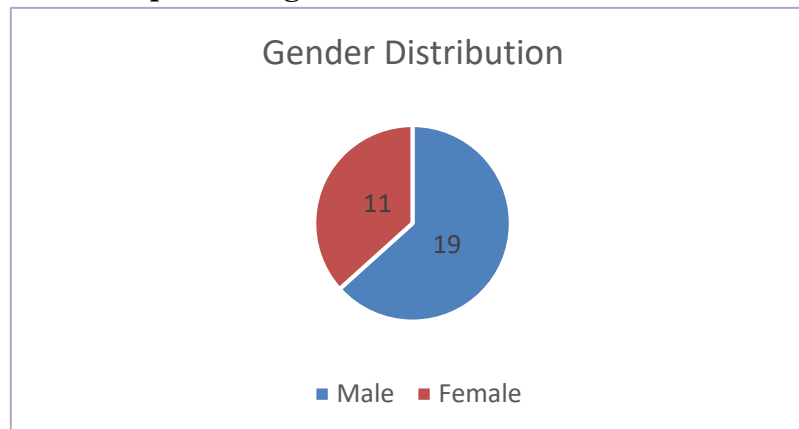
Source: Field Survey, September, 2023

Table 1.0 and figure 1.0 shows gender distribution of selected respondents. Out of the total of 30 respondents, 19 of them were males representing 63.33% and 11 females representing 36.67%.

Table 1.1: Age Distribution of Respondents

Age Range	Frequency	Total (%)
19-20	0	0.00
21-30	11	36.67
31-40	10	33.33
41-50	9	30.00
51-60	0	0.00
Total	**30**	**100.00**

Source: Field Survey, September 2023

The above table reveals that out of the 30 respondents who participated in this study, 11, 10 and 9 respondents were within the age range of 21-30, 31-40 and 41-50 years respectively with age range between 19-20 and 51-60 having zero score. Overall the mean age of the respondent's is 36.5. This shows that selected respondents were all adults with apparent cognitive abilities that comes with adulthood and capable of making decision and guiding their behaviors.

Table 1.2 Educational Level of Respondents

Gender	Frequency	Total (%)
HND	0	0.00
1st Degree	6	20.00
Masters	16	53.33
PhD	8	26.67
Total	**30**	**100.00**

Source: Field Survey, September 2023

From the above table, respondents who had their 1st degree were 6 making 20%, master degree were 16 representing 53.33% and PhD holders were 8 representing 26.67% of which two (2) were Associate Professor.

Table 1.3: Cross-tabulation of Positions, Educational and Age of Respondents (Superiors)

Gender			31-40	41-50	Total
			Age		
Male	**Position**	Dean	0	4	4
		Director Business Development	1	0	1
		HOD	1	2	3
		Quality Assurance Director	0	1	1
	Total		2	7	9
Female	**Position**	Dean		1	1
	Total			1	1
Total	**Position**	Dean	0	5	5
		Director Business Development	1	0	1
		HOD	1	2	3
		Quality Assurance Director	0	1	1
	Total		2	8	10

Source: Field Survey, 2023

From the above table it can be deduce that out of the ten (10) superiors randomly selected from the faculties and administrative offices of the Tamale Technical University was composed of 9 males and 1 female of which 5 were Deans of faculties, 3 were Head of Departments (HoDs) and 2 of them were heads of two directorates of the university. Two respondents were within the ages of 31-40 and 8 of them were within the age of 41-50 years.

4.1 Reliability and Validity Statistics results

The reliability of the various Questionnaires used are shown in table 1.4 below. The Cronbach Alpha was used to test for internal consistency of the questionnaire which is stated in table 1.4 below.

Table 1.4: CENQ, TEIQue SF and TEIQue 360 SF, CQS/CQS Observer Report reliability

Reliability Statistics		
Scale	**Cronbach's Alpha**	**N of Items**
CENQ (Superior)	0.434	13
CENQ (Subordinates)	0.545	13
TEIQue SF (Superior)		
Wellbeing	0.824	6
Self-Control	0.616	6
Emotionality	0.449	8
Sociability	0.723	6
Global-Trait	0.876	30
TEIQue SF (Subordinates)		
Wellbeing	0.810	6
Self-Control	0.655	6
Emotionality	0.502	8
Sociability	0.457	6
Global-Trait	0.876	30

TEIQue 360 SF		
Wellbeing	0.508	6
Self-Control	0.364	6
Emotionality	0.442	8
Sociability	0.482	6
Global-Trait	0.806	30
CQS (Superior)		
Metacognitive CQ	0.694	4
Cognitive CQ	0.969	6
Motivational CQ	0.861	5
Behavioral CQ	0.865	5
Global CQ	0.909	30
CQS (Subordinates)		
Metacognitive CQ	0.928	4
Cognitive CQ	0.753	6
Motivational CQ	0.868	5
Behavioral CQ	0.923	5
Global CQ	0.914	20
CQS Observer Report		
Metacognitive CQ	0.946	4
Cognitive CQ	0.930	6
Motivational CQ	0.920	5
Behavioral CQ	0.915	5
Global CQ	0.960	20

Reliability statistics presented above shows a pattern of scores for each questionnaire. The Culture and Emotional Nexus Questionnaire (CENQ) was administered to selected Superior and Subordinate as showed in the table above. Both CENQ for superior and subordinates had reliability score of 0.434 and 0.545 respectively, however the elimination of certain variables within the questionnaire improve the scores to about 0.7. The Global reliability score for TEIQue-SF(Superior), TEIQue-SF (Subordinate) and TEIQue 360 SF was 0.876, 0.876 and 0.806 respectively. Global CQ Reliability score of CQS (Superior) and CQS (Subordinate) and CQS Observer Report was 0.909, 0.914 and 0.960 respectively. Despite the high reliability of the global scores of the CQ and EI some factor scores had relatively low scores. But overall, despite the low sample of respondents used the CENQ, TEIQue and CQS attained reasonable reliability score indicating relatively high internal consistency of the study.

4.1 TEIQue SF Analysis and Discussion

The TEIQue SF was administered to 10 Senior Member position holders and 20 subordinates of the Tamale Technical University. They were purposively selected because of their position and the number of subordinates that works under them. Emotional Intelligence is a great leadership quality as established in the preceding chapters of this research hence, TEIQue SF was used to measure the degree of EI of both superior and subordinates, TEIQue SF-360 was administered to 20 subordinates to confirm the EI of their superiors.

Scores of the TEIQue ranges from 1(Completely Disagree) to 7(Completely Agree), with a highest total global EI trait mean score of 210/30 = 7.00 and a lowest of 30/30 = 1.00. All variables of the TEIQue requiring reverse scoring were reversed scored for each respondent where applicable using the SPSS statistical software. Table 1.5a and 1.5b below shows the values of scoring for TEIQUE SF for three (3) superiors out of the 10 selected respondents to show the change in scores which was duly

executed in same fashion for the TEIQue 360-SF. Reverse scoring TEIQue questions are (TEIQue 2, 4, 5, 7, 8, 10, 12, 13, 14 16, 18, 22, 25, 26 and 28).

Table 1.5a: Answers to the TEIQue-SF (From 3 Superior perspectives) before reverse scoring

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	4	5	5	5	5	4	4	5	4	4	4	4	6	2	2	2	3	3	3	2	2	3	3	3	3	3	2	3	2	2
2	2	7	1	4	6	1	2	5	2	5	3	4	6	5	2	2	3	6	2	2	2	3	2	2	3	7	2	2	1	3
3	5	5	2	6	7	7	7	7	1	7	3	7	7	4	2	3	2	7	2	2	2	5	2	2	5	2	1	6	1	6

Table 1.5b: Answers to the TEIQue-SF (From 3 Superior perspectives) after reverse scoring

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	4	3	5	3	3	4	4	3	4	4	4	4	2	6	2	6	3	5	3	2	2	5	3	3	5	5	2	5	2	2
2	2	1	1	4	2	1	6	3	2	3	3	4	2	3	2	6	3	2	2	2	5	2	2	5	1	2	6	1	3	
3	5	3	2	2	1	7	1	1	1	1	3	1	1	4	2	5	2	1	2	2	2	3	2	2	3	6	1	2	1	6

From table 1.5a and 1.5b the values of TEIQue-SF scores of 3 superiors is presented to show how the scores of TEIQue-SF transforms after they are **"reversed scored".**

4.3 Factor Scores:

Analyzing Scores of TEIQue is divided into the four facets of Emotional Intelligence, that is Wellbeing, Self-Control, Emotionality, Sociality and overall total the Global Trait Score.

Wellbeing: This measures respondent's general emotional well-being. The emotional wellbeing is how an individual is able to experience positive emotions and manage varied negative emotions efficiently and effectively. This is measured by the mean mark of TEIQue (5, 9, 12, 20, 24 and 27) scores.

Self-Control: Is how respondent is able to manage their own behavior and emotions when they find themselves in an emotionally charged circumstances. Self-control simply sought to measure how well respondents were able to control impulses, remain calm and resist temptations and well composed even in the most delicate situations. Self-control is measured by averaging the scores of TEIQue (4, 7, 15, 19, 22 and 30).

Emotionality: This measures how well respondent's know and understand their own emotions. How well are respondents aware of their emotional state and how well can identify and express they feelings accurately. The mean mark of TEIQue (1, 2, 8, 13, 16, 17, 23 and 28) measures respondent's emotionality.

Sociability: This measures respondents ability to be able to detect, recognize and understand the emotions of others and effectively interact in different social situations. How well can a respondent empathize with other people around them, encourage their emotional state and build good rapport with them. This is measured by the mean mark obtained from TEIQue (6, 10, 11, 21, 25 and 26).

Global-Trait Score: this is the mean mark obtained when the four mean mark of each EI trait factor is summed up or the mean of 30 responses. That is TEIQue (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30).

Note: *The highest total score a respondent can attain for either the four EI trait factors or global trait score is 7.00, Average score is 4.50 and lowest score is 1.00.*

Table 1.6a: Cross-tabulation of Factor scores and Global Trait Scores (Superiors)

No	Wellbeing 7.00	Self-Control 7.00	Emotionality 7.00	Sociability 7.00	Global-Trait 7.00
1	3.33	3.17	3.88	3.33	3.40
2	3.00	2.67	3.63	3.50	3.23
3	3.33	4.67	4.63	4.33	4.17
4	2.17	3.17	5.75	3.50	3.83
5	2.33	3.50	4.75	3.17	3.63
6	2.67	4.67	4.75	4.00	4.03
7	3.17	5.50	5.38	4.17	4.23
8	6.67	5.83	6.13	6.83	6.27
9	2.17	5.17	4.13	1.67	3.40
10	3.00	3.33	4.63	3.00	3.63

Figure 1.1: TEIQue SF Global Trait score of superiors.
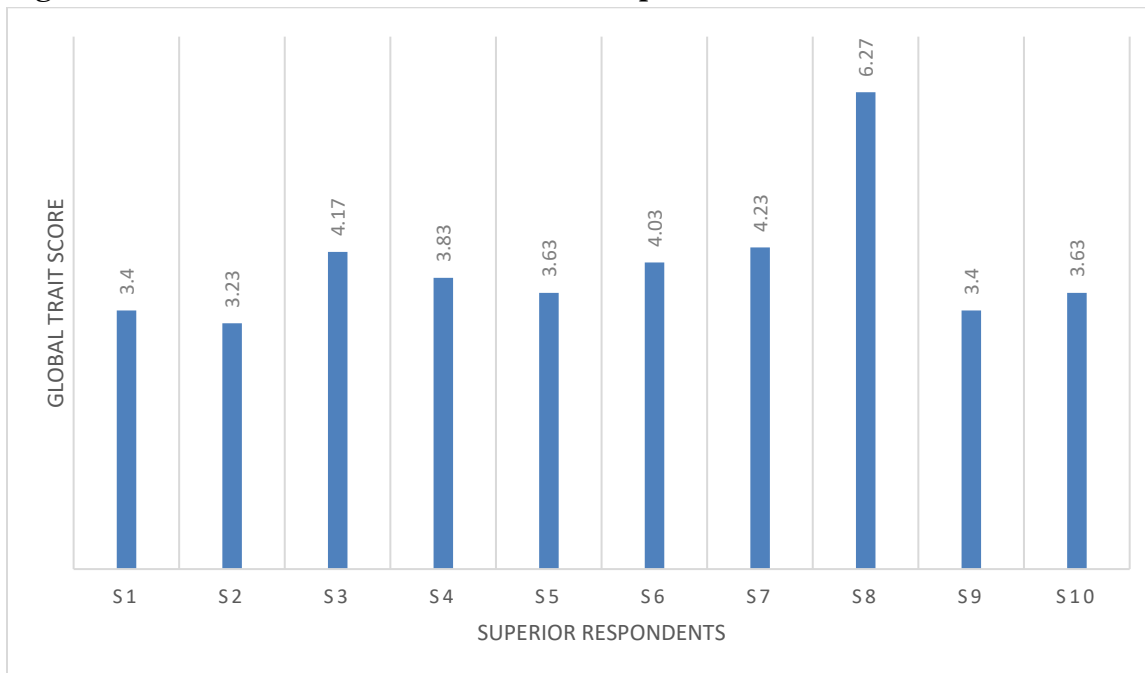
Table 1.6a shows the EI scores attained by the selected superiors which is graphically presented in figure 1.1. The diagram and table above presents the global trait scores of the 10 senior member positions holders selected for this study. S8 scored the highest with 6.27 while S2 scored 3.23 the least among the respondents. With a mean Global EI Score of 4.00. From the table factor scores depicts average to high degree of the four emotional intelligence traits of the selected superiors.

Table 1.6b: Factor scores and Global Scores (360 scores by Gender)

	Wellbeing		Self-Control		Emotionality		Sociability		Global-Trait	
Gender	M	F	M	F	M	F	M	F	M	F
1	4.00	3.83	4.50	3.33	4.00	4.50	3.83	3.00	4.03	3.87
2	1.33	1.83	1.83	3.67	1.63	2.75	1.67	4.17	1.63	2.90
3	3.83	3.00	3.67	3.17	4.00	4.25	4.83	3.83	4.23	3.63
4	3.50	2.83	2.50	3.83	3.25	3.63	4.17	2.33	3.37	3.07
5	2.00	2.17	2.83	5.17	2.75	2.75	2.83	5.17	2.73	3.73
6	2.00	2.67	2.83	3.00	2.63	3.88	2.50	3.83	2.67	3.33
7	3.67	3.17	3.33	3.33	3.00	4.13	3.50	3.83	3.30	3.70
8	2.33	5.00	2.00	4.00	1.88	3.63	2.17	4.50	2.13	4.20
9	4.00	3.33	3.83	4.17	3.38	3.63	3.50	4.17	3.63	3.80
10	2.83	3.67	3.83	4.00	3.75	3.38	3.67	3.83	3.60	3.67

Source: Field Survey, 2023

The table above shows the factor scores as well as the Global trait scores for the TEIQue360 that was administered to selected subordinates to rate their superior's EI degree. With a minimum service period of 12 months and maximum of more than 8 years, subordinates were deemed more than average very familiar with their superiors and capable of making correct judgment about their emotional behaviors. Using the Global Trait Scores of the TEIQue 360 SF, from the above table the minimum score offered by the male and female gender was 1.63 as against 2.90 and the maximum was 4.03 and 4.20 respectively. The findings suggest that, selected superiors 360 scores weren't gender biased as their 360 EI rating by their subordinates by gender were relatively same.

Figure 1.2: TEIQue 360 Global Trait score by Gender.
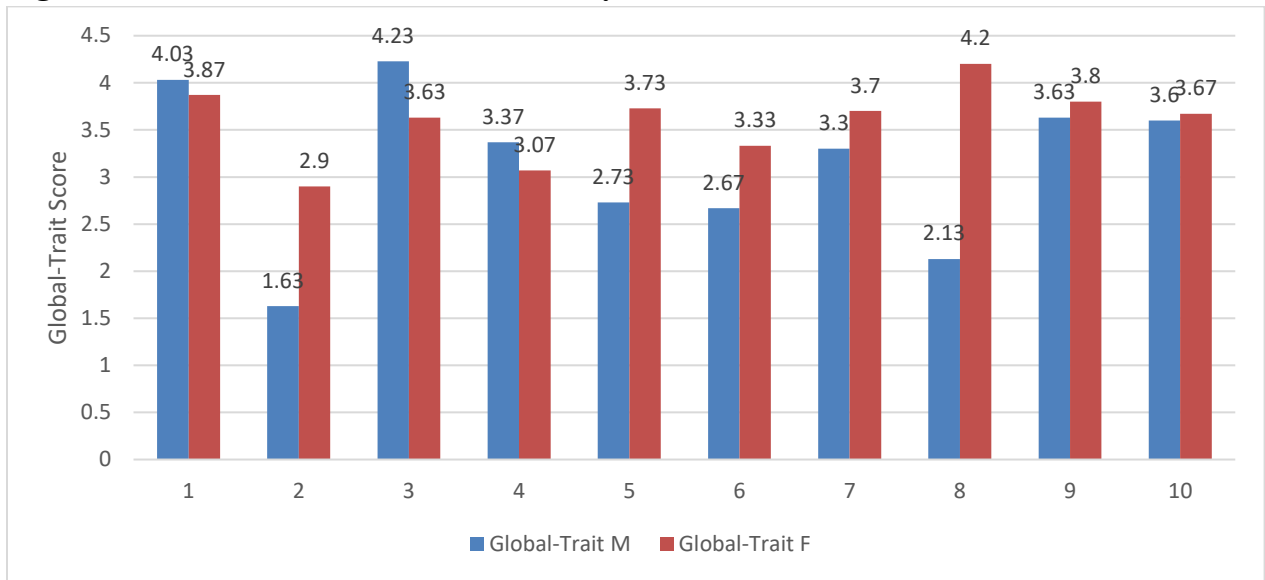
The graph shows the pattern of responses using the Global-Trait Score of TEIQue 360 SF which was ministered to the subordinates. It shows how subordinates rated the overall emotional trait of their superiors. Comparing this diagram to the diagram of the TEIQue self-report questionnaire administered to Senior Members, S8 scores 4.2 from the female subordinate and 2.13 from the male subordinate as against the self-score of 6.27. Comparing data from the above figure there is an average higher rating from the female subordinates of their superior than their male counterparts apart from S1, S3 and S4. This shows female subordinates rated the selected superiors a little higher than the male subordinates, though overall in the university this might not be the case in totality.

Table 1.7 Subordinate TEIQue Scores

No	Wellbeing	Self-Control	Emotionality	Sociability	Global-Trait
	7.00	7.00	7.00	7.00	7.00
1M	2.00	2.00	2.13	2.50	2.30
2M	1.83	1.67	1.75	1.67	1.73
3M	5.17	4.67	1.88	3.50	3.77
4M	2.33	2.50	2.75	2.00	2.37
5M	1.83	2.33	2.63	2.00	2.13
6M	2.00	2.83	2.38	2.67	2.33
7M	3.00	3.67	3.50	3.17	3.30
8M	1.67	2.83	1.75	1.83	2.10
9M	1.00	3.50	3.13	3.33	2.67

10M	2.00	2.17	2.13	2.50	2.13
11F	1.67	2.67	2.38	2.67	2.17
12F	1.33	2.17	2.13	2.67	2.03
13F	2.33	4.00	2.38	3.83	3.00
14F	1.67	3.17	2.50	2.67	2.47
15F	1.00	1.83	1.38	2.33	1.63
16F	2.50	2.33	2.63	3.33	2.70
17F	1.50	2.50	1.88	3.00	2.13
18F	1.00	1.33	1.50	1.00	1.20
19F	2.00	2.33	2.38	2.83	2.40
20F	3.33	3.33	3.13	3.83	3.33

The table above presents the factor scores as well as the global scores attained by subordinate. 20 subordinate respondent in total, 10 for each gender. From the table the highest factor scores attained by subordinate respondents by gender was (*Wellbeing*-Male: 5.14, Female: 3.33; *Self-Control*-Male: 4.67, Female: 4.00; *Emotionality*-Male: 3.50, Female: 3.13; *Sociability*-Male: 3.50, Female: 3.83; *Global-Trait Score*- Male: 3.30, Female: 3.33) and the lowest scores attained by respondent by gender was (*Wellbeing*-Male: 1.00, Female: 1.00; *Self-Control*-Male: 1.67, Female: 1.33; *Emotionality*-Male: 1.75, Female: 1.38; *Sociability*-Male: 1.67, Female: 1.00; *Global-Trait Score*- Male: 1.73, Female: 1.20). The data above indicates relatively high gap by gender in terms of the factor and global scores of selected subordinates. This findings might not necessarily be the same when the entire university is studied.

Figure 1.3: TEIQue SF Global Trait score of subordinate respondents.
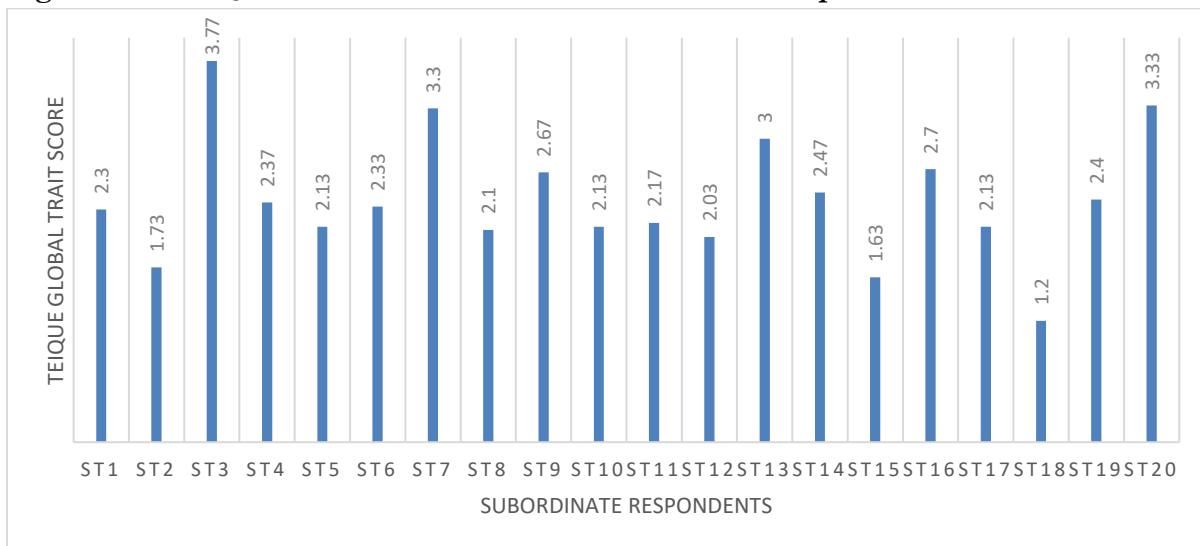
Source: Fieldworks, August, 2023

From the above diagram which shows only the Global Trait Score by gender of respondents, the highest Global Trait score is 3.77 (ST3) and 3.33 by (ST20) in the same instance the lowest scores are 1.73 by (ST2) and (1.20) by ST18. This suggest the EI level of subordinate participants is relatively high among the male gender than their female counterparts. With a mean Global EI score of 2.4. When the mean Global EI score of selected superiors (4.0) and subordinates(2.4) is compared, it indicates superiors have much EI than subordinates but with the low sample, this findings can't be generalize for the entire university, however its most likely to be same.

4.4 Factor Scores Cultural Quotient Scale (CQS and CQS Observer Report)

This sections presents a descriptive statistic of the CQS cultural Intelligence Scale and its observer report. The Cultural Intelligence Scale (CQS) and CQS observer report was administered exactly as the TEIQue and TEIQue 360 administered. 20 Subordinate respondents were administered both CQS and CQS Observer Report to self-report about their own Cultural Intelligence (CI) level as well as report about their perception of their superior CI level. Superior respondents were 10 in number and administered only CQS to self-report about their CI levels.

Scores of the CQS and CQS Observer report ranges from 1(Very Strongly Disagree) to 7 (Very Strongly Agree), with a highest total global CQS mean score of $140/20 = 7.00$ and a lowest of $20/20 = 1.00$. unlike the TEIQue CQS does not require reverse scoring.

4.5 CQS Factor Scores:

The 20 item Cultural Intelligence Scale administered to respondents were analyzed based on the four-factor phases of CQS. The CQ factors are Metacognitive CQ, Cognitive CQ, Motivational CQ and Behavioral CQ and then the overall CQ Global Score.

Metacognitive CQ (CQ Strategy): This measures respondents ability to strategize and interact effectively in cultural diverse situations. This is measured using (CQS 1, 2, 3 and 4)/4.

Cognitive CQ (CQ Knowledge): This examines the extent to which respondents know the different values, beliefs, informs customs and values of diverse cultures they normally interact in their daily activities. This factor is measured by (CQ 5, 6, 7, 8, 9 and 10)6.

Motivational CQ (CQ Drive): To what extent do is respondents willing to learn and connect with people from different cultures. The questions posed to respondents under tis factors sought to explore whether the respondents has genuine curiosity as well as enthusiastic and open minded to cross-cultural interactions. (CQ 11, 12, 13, 14, 15)/5 is what is used to measures respondents motivational CQ.

Behavioral CQ (CQ Action): It measures the extent to which respondents are able to modify their behaviours, actions and communications styles to engage with diverse cultures effectively. This factor is used to measure respondent ability to put their CQ Knowledge and CQ Motivation to effectively and efficiently function in a cross-cultural interaction. This CQ factor is measured using (CQ 16, 17, 18, 19 and 20)/5.

Global CQ Score: This measures the overall cultural Intelligence (CI) of respondents. It is measured by (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20)/20.

Table 1.8a: CQS Factor scores and CQS Global Scores (Superiors)

No	MetaCognitive 7.00	Cognitive 7.00	Motivation 7.00	Behavioral 7.00	Global-CQ 7.00
1	2.50	3.50	2.40	2.00	2.65
2	1.00	1.17	1.60	1.80	1.40
3	2.25	5.83	3.00	4.20	4.00
4	1.25	1.83	1.20	5.20	2.40
5	1.50	2.17	2.40	2.00	2.05
6	1.25	2.17	1.80	2.00	1.85
7	3.00	3.67	4.40	3.60	3.70
8	2.25	2.00	1.60	3.80	2.40
9	2.50	5.50	2.40	3.20	3.55
10	2.50	4.00	1.40	2.00	2.55

Source: Field Survey, 2023

Figure 1.4: CQS Global CQ score of Superiors.
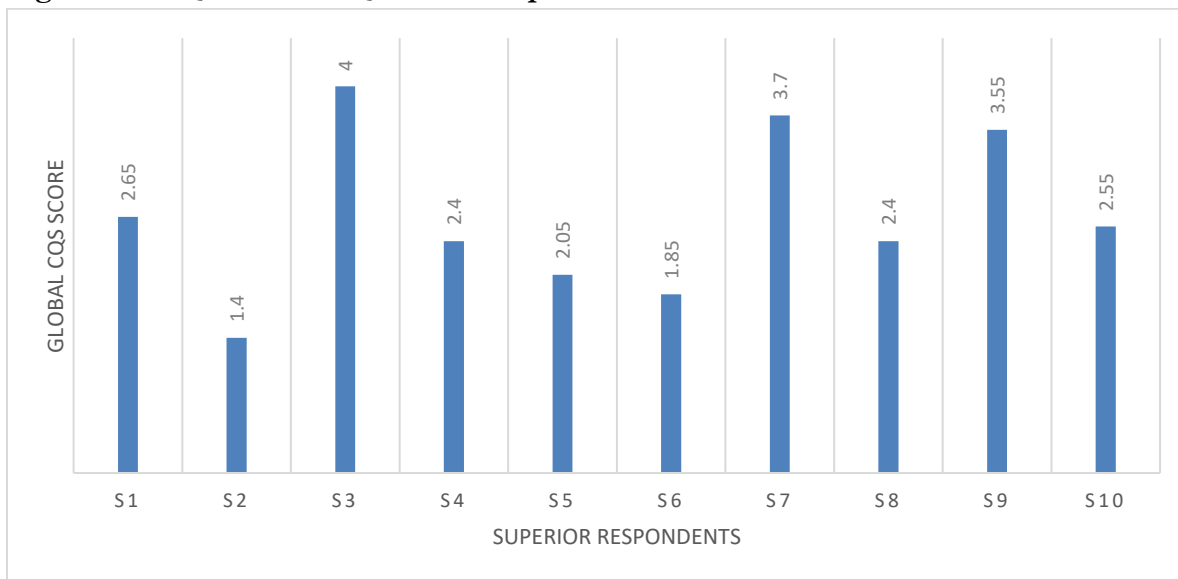
The table above and graph presents the factor and Global score of CQS administered to senior member position holder of the study organization. The highest score for each factor was; Metacognitive CQ (CQ Strategy)-3.00, Cognitive CQ (CQ Knowledge)-5.50, Motivational CQ (CQ Drive)-4.40 and Behavioural CQ (CQ Action)-5.20 and Global CQ-4.00. Also the lowest score for each factor was 1.00, 1.17, 1.40, 1.80 and 1.40 for CQ strategy, CQ Knowledge, CQ Drive, CQ Action and Global CQ respectively. In comparison to Table 1.6a which depict senior member EI Fscores, it shows a relative high EI score of selected Senior Member respondents as compared to their CI scores.

This again, can't be generalized for the entire university as an in-depth studies with greater samples could show different results. From the above graph, respondent (S3) scored the highest Global CQ Score of 4.00, followed by S7 and S9 with Global CQ score of 3.7 and 3.55 with the lowest score of 1.4 by S2. With a mean Global CQS score of 2.6.

Table 1.8b: Factor scores and Global Scores (CQS Observer Report)

	MetaCognitive		Cognitive		Motivation		Behavioral		Global-CQ	
Gender	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
S1	2.00	4.25	3.00	4.00	3.60	4.40	5.60	7.00	3.60	4.90
S2	2.25	4.00	1.50	6.83	1.40	6.40	1.40	5.60	1.60	5.85
S3	6.25	2.00	1.17	2.50	3.40	1.20	2.00	2.80	2.95	2.15
S4	3.75	6.00	3.50	5.67	3.20	7.00	3.20	6.80	3.40	6.35
S5	2.00	3.50	2.83	4.00	4.00	5.00	3.40	2.80	3.10	3.35
S6	2.00	2.25	3.33	2.33	2.20	1.00	2.40	2.80	2.55	2.10
S7	2.00	1.50	3.33	1.67	2.60	1.00	2.20	1.80	2.60	1.50
S8	2.00	1.75	3.50	2.00	4.60	4.00	4.00	4.00	3.60	2.95
S9	3.25	4.00	3.00	3.83	3.00	4.00	3.00	4.00	3.05	3.95
S10	6.00	4.00	5.17	3.17	6.80	3.60	5.60	3.60	5.85	3.65

Figure 1.5: CQS Global score by Gender.

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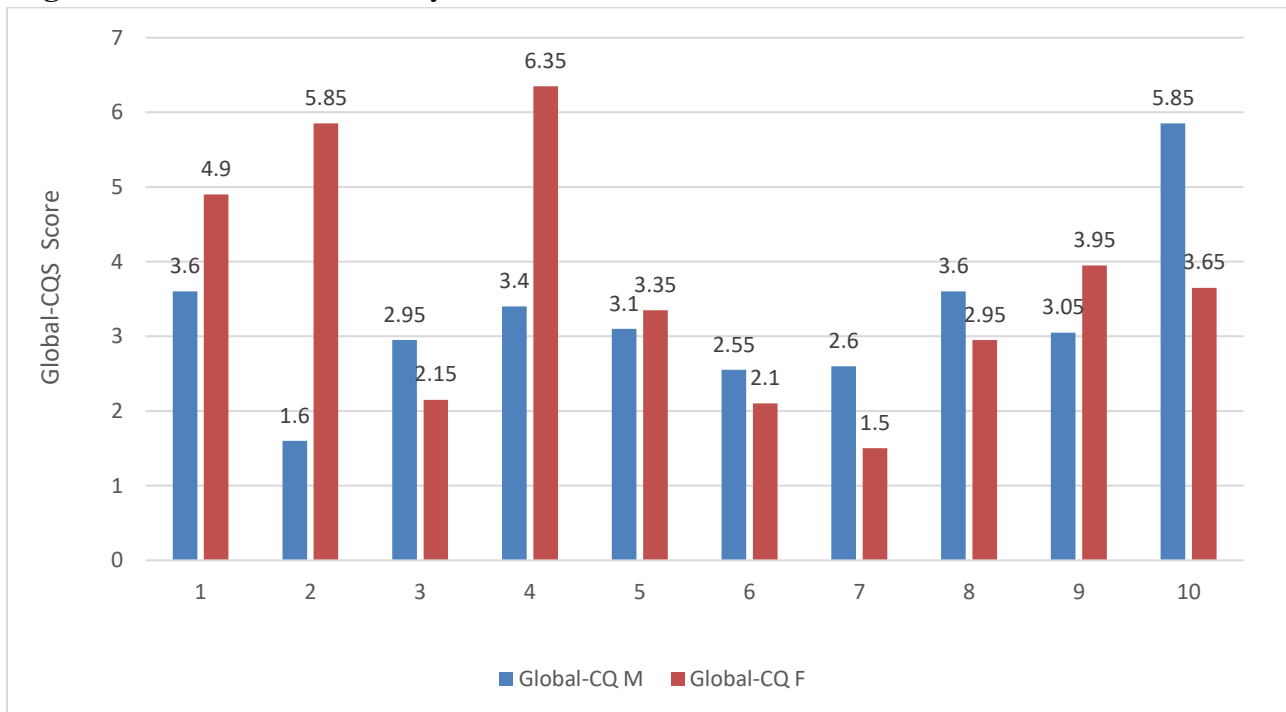
The above table and graph captures the CQS Observer report by gender that was administered to subordinate respondents to rate the CI of their respective superiors. The highest global score that was recorded by gender (Male-5.85-S10) and (Female-6.35-S4) and the least offered by each gender was (Male-1.60-S10 and Female-1.50-S7). From the above table it reveals that the highest score offered was that of the Female subordinates for S4 at 6.35 who also scored 3.40 by the male subordinate. The graph shows the pattern of responses using only the Global CQ Score of selected subordinates. It shows how subordinate respondents rated the overall CI of their superiors. Comparing this diagram to the diagram of the CQS self-report questionnaire administered to Senior Members, S3 scores 4.0 followed by S9 with 3.70 as against the response of the CQS Observer Report from their subordinates with S3 scoring (M-2.95 and F-2.15) and S9 (M-3.05 and F-3.95). However overall from the graph, there is a slight high rating from female gender of their superior cultural intelligence levels than their male counterparts. This findings due to very low samples can't readily be generalized for the entire university as total study might reveal different results.

Table 1.9 Subordinate CSQ Self-report Scores

No	MetaCognitive	Cognitive	Motivation	Behavioral	Global-CQ
1M	1.00	1.00	1.20	2.20	1.35
2M	1.50	1.50	1.60	1.80	1.60
3M	6.25	1.50	5.20	1.40	3.35
4M	4.25	5.00	3.20	3.60	4.05
5M	1.00	3.50	1.40	2.40	2.20
6M	2.25	2.33	2.20	2.60	2.35
7M	3.50	2.33	1.80	2.00	2.35
8M	4.50	3.33	2.60	3.60	3.45
9M	1.00	2.33	2.20	2.40	2.05
10M	2.75	2.83	1.40	2.20	2.30
11F	6.50	5.83	2.60	7.00	5.45
12F	2.00	2.17	1.40	1.60	1.80
13F	4.00	4.33	2.60	4.40	3.85
14F	4.00	3.83	1.20	4.00	3.25
15F	1.00	3.67	1.60	2.00	2.20
16F	3.50	4.50	1.60	4.20	3.50
17F	2.50	3.33	1.60	3.60	2.80
18F	1.00	6.50	5.00	3.00	4.15
19F	2.75	3.00	3.00	6.00	3.70
20F	3.00	3.33	3.80	3.80	3.50

Source: Field survey, 2023

Figure 1.6: Global CQS score of subordinate respondents.
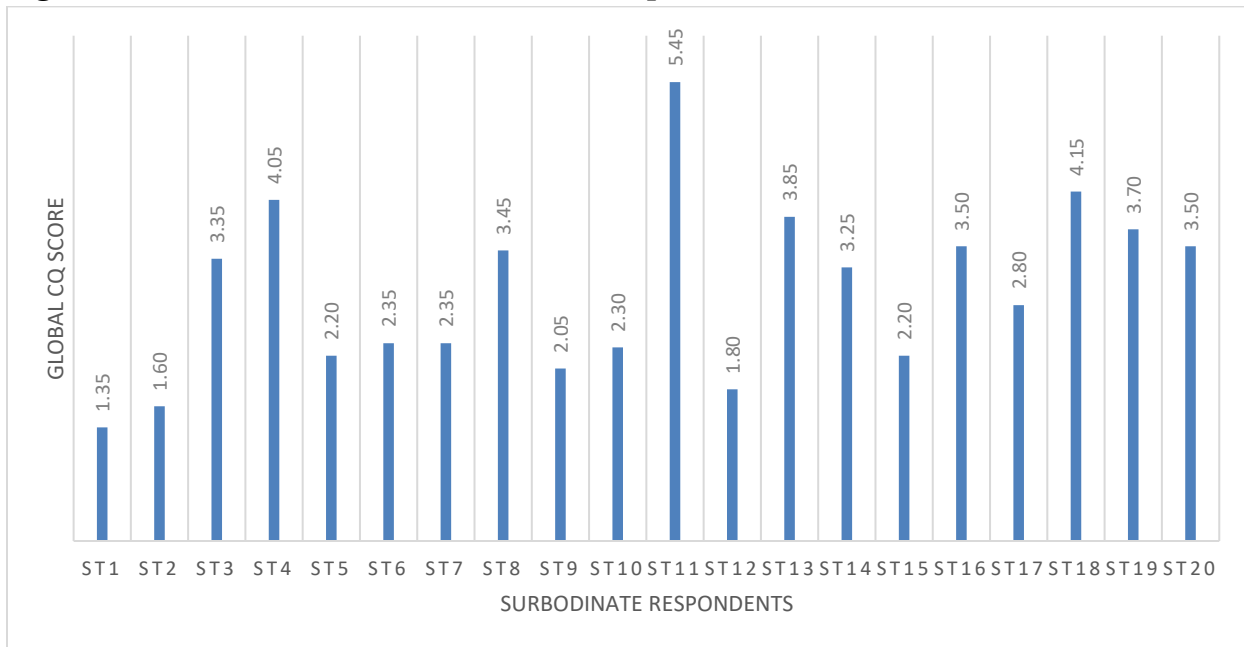
Source: Fieldworks, August, 2023

Note: *ST1 to ST10 are male subordinate respondents and ST11 to ST 20 are female subordinate respondents.*

The table above presents the factor and global CQS scores attained by subordinates. There were 20 subordinate respondent in total, 10 for each gender. From the table the highest factor scores attained by subordinate respondents by gender was (*Metacognitive-*Male: 6.25, Female: 6.50; *Cognitive-*Male: 5.00, Female: 6.50; *Motivation-*Male: 5.20, Female: 5.00; *Behavioural-*Male: 3.60, Female: 7.00; *Global-CQ Score-* Male: 4.05, Female: 5.45) and the lowest scores attained by respondent by gender was (*Metacognitive-*Male: 1.00, Female: 1.00; *Cognitive-*Male: 1.00, Female: 2.17; *Motivation-*Male: 1.20, Female: 1.20; *Behavioural-*Male: 1.40, Female: 1.40; *Global-CQ Score-* Male: 1.35, Female: 1.80). From the above diagram which shows only Global Trait Score of subordinate respondents. the highest Global CQ score is 5.45 (ST11) and the lowest score is 1.35 by ST1.

However when this diagram 1.5 is compared to diagram 1.4 which highlights the superiors Global CQ scores, there is a relative gap between Cultural intelligence of subordinate to that of their superiors, i.e. averagely subordinates shows a higher degree of CI than their superiors. With a Mean Global CQS of 2.9 against superior mean Global CQS of 2.6, however the flaw of this findings is that, it can't be generalized to entire university due to low samples.

4.5 Proving or Disproving the hypothesis

This dissertation put forward a number of hypothesis and at this juncture, the study sought to use both regression and bivariate correlation to determine whether the null hypothesis or the research hypothesis can be substantiated. To prove or disprove these hypothesis both regression and bivariate correlation was used to determine the chi-square significant value (p) between CI and EI of both superiors and subordinates. Correlation significance value (p) > 0.05 to 1.00 disproves the Null Hypothesis (NH) while < 0.05 confirms the Null hypothesis over the Research hypothesis.

a. *NH1:* CI has no relationship with an individual's EI and vice versa.

   RH1: CI has some relationship with an individual's EI and vice versa.

Table 2.0: Bivariate Correlation of Emotional Intelligence (EI) and Cultural Intelligence (CI)

	Correlations	Global Trait EI	Global CQS
Global Trait EI	Pearson Correlation	1	.149
	Sig. (2-tailed)		.431
	N	30	30
Global CQS	Pearson Correlation	.149	1
	Sig. (2-tailed)	.431	
	N	30	30

As part of the hypothesis proposed in this study, the null hypothesis was that there is no correlation between emotional and cultural intelligence, but the bivariate analysis presented in the table above shows some positive relationship between CI and EI with Pearson Correlation Coefficients of 0.149 despite the low sample used. Hence the alternate hypothesis is accepted and the null hypothesis is rejected.

b. *NH2:* EI and CI has no correlation with employee Job Satisfaction/Performance.

   RH2: EI and CI has correlation with employee Job satisfaction/Performance.

Table 2.1: Bivariate Correlation of EI, CI and Employee Job Satisfaction/Performance

	Correlations	Job Sat	Job Per	Global Trait EI	Global CQS
Job Sat	Pearson Correlation	1	.687**	.662**	.059
	Sig. (2-tailed)		.000	.000	.755
	N	30	30	30	30
Job Per	Pearson Correlation	.687**	1	.696**	.224
	Sig. (2-tailed)	.000		.000	.234
	N	30	30	30	30
Global Trait EI	Pearson Correlation	.662**	.696**	1	.149
	Sig. (2-tailed)	.000	.000		.431
	N	30	30	30	30
Global CQS	Pearson Correlation	.059	.224	.149	1
	Sig. (2-tailed)	.755	.234	.431	
	N	30	30	30	30

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

The table above presents the Pearson correlation between Cultural Intelligence (CI), Emotional Intelligence (EI) and Employee Job Satisfaction/performance of the 30 participant employees. From the table the Pearson Correlation Coefficient for Job Satisfaction-Job Performance, Job satisfaction-Global Trait EI, Job Satisfaction-Global CQS, Job Performance-Global Trait EI and Job Performance-Global CQS was at 0.687, 0.662, 0.059, 0.696 and 0.224 respectively. In The same instance Job performance, Global Trait and Global CQS has the Pearson correlation coefficient of 0.646 and 0.335 respectively. Hence, the Null hypothesis is disproved and the Research hypothesis is accepted. Overall, the table shows that there is a relationship between Job Performance, Job Satisfaction and CI/EI, which disproves the Null hypothesis in favour of the research hypothesis. But there is a possibility of an alternate findings when the entire university is studied.

4.6 Regression for TEIQue and CQS against Job Satisfaction and Performance.

The study explored the impact of EI/CI on Employee Job Satisfaction/Performance using regression analysis. The regression model was used to determine the predictability of EI and CI *(independent variables)* on Employees Performance/Satisfaction **(dependent variables)** and A Two-Way Analysis of Variance (Two-Way ANOVA) to determine data dispersion and variation of data. To determine if Predictor variables are actually affecting Dependent Variables, a linear regression model must exhibit normality and linearity whereby an increase or change in the independents variable significantly affects the dependent variable, findings of these analysis are presented below using a Regression model, a Two-Way ANOVA, a Histogram to show curve of error in distribution and A scatter plot to show linearity. To do this, the hypothesis below was proposed;

c. *NH3:* EI and CI has no impact on employee Job Satisfaction/Performance.

d. *RH3:* EI and CI has impact on employee Job satisfaction/Performance.

Table 2.2: Linear regression of Job Satisfaction against Emotional Intelligence (EI)/Cultural Intelligence (CI) for superior respondents

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.663[a]	.440	.399	1.21162	.440	10.614	2	27	.000

a. Predictors: (Constant), Global CQS, Global Trait EI
b. Dependent Variable: Job Satisfaction

Two-Way-ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.163	2	15.582	10.614	.000[b]
	Residual	39.637	27	1.468		
	Total	70.800	29			

a. Predictors: (Constant), Global CQS, Global Trait EI
b. Dependent Variable: Job Satisfaction

The tables above presents a regression model summary including a Two Way ANOVA of Independent predictors *(CI/EI)* on dependent variable *(Job Satisfaction)*. From the summary table the R-Squared recorded is 0.44, which means 44% of the variability in the dependent variable, job satisfaction can be accorded to the independent variables EI and CI. The F-value for the regression component is 10.614, which suggest that 10.6% of respondent employees job satisfaction can be attributed to their emotional and cultural intelligence with a corresponding significance level (p-value) of 0.000. This suggests that there is statistically significant relationship between the predictors (independent variables- Global CQS/Global EI Trait) and the dependent variable (Job Satisfaction). The F-value indicates the overall significance of the regression model, which suggests that predictors (EI and CI) do have some significant impact on the dependent variable (Employees Job Satisfaction)., While the p-value represents the probability of obtaining such results by chance. The p-value recorded is less than the conventional significance level of 0.05, which suggest that the model finding are not by mere chance.

Figure 1.7: Histogram of Regression Standardized Residual for X1(Job Satisfaction)
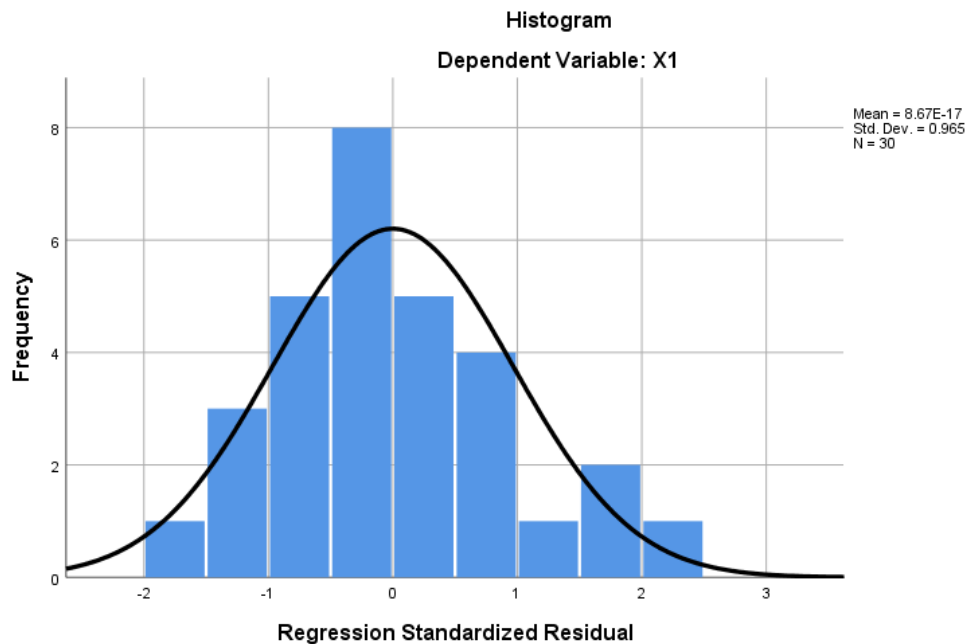
To determine normality of error distribution, the histogram was generated using data residuals with Dependent Variable X1 (Job Satisfaction). With a mean distribution of 8.67, a marginal error of -17 and standard deviation of 0.965. The distribution shows the shape of a bell curve which suggest that error in the regression model is relatively average unlike when the histogram shows a skewed curve indicating a large degree of error.

Figure 1.8: Scatter Plot of Unstandardized Predicted Value (EI/CI) and X1(Job Satisfaction)

Simple Scatter with Fit Line of Job Satisfaction by Unstandardized Predicted Value
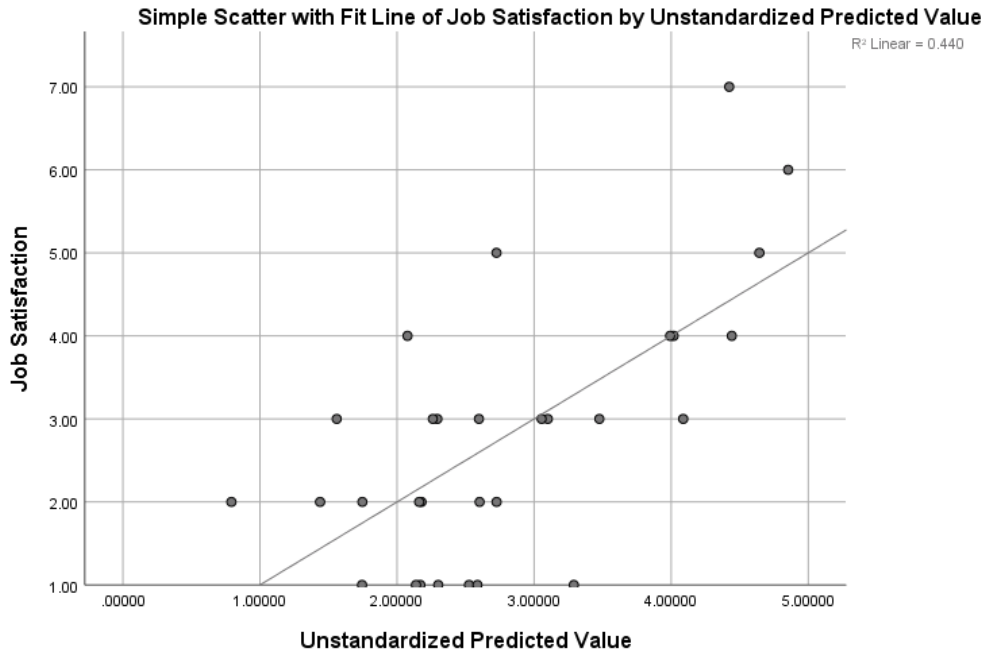
The scatter plot above, presents a pictorial evidence of the linearity level. From the diagram apart from a few respondents the rest of the respondent's job satisfaction level moves in unison with increasing CI and EI with respondents having a job satisfaction level of 7 with more than 4.30 CI and EI level. However employees whose job satisfaction did not increase with increasing CI and EI levels may be attributed to other predictors not captured in our model. Overall, despite the low sample, the diagram suggest some average linearity between the predictors and the dependent variable.

Similarly; this findings can't be generalized for the entire university unless adequate sample is used for the study though similar findings is very likely.

Table 2.3: Linear regression of Job Performance and Emotional Intelligence (EI)/Cultural Intelligence (CI) .

						Model Summary[b]			
				Std. Error		Change Statistics			
Model	R	R Square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.707[a]	.500	.462	1.10154	.500	13.477	2	27	.000

a. Predictors: (Constant), Global CQS, Global Trait EI
b. Dependent Variable: Job Performance

			Two-Way ANOVA[a]			
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.705	2	16.353	13.477	.000[b]
	Residual	32.762	27	1.213		
	Total	65.467	29			

a. Predictors: (Constant), Global CQS, Global Trait EI
b. Dependent Variable: Job Performance

The regression model above presents both a model summary and a Two Way ANOVA of employee **job performance** (dependent variables) and **CI/EI** as predictors (independent variables). The R-square and F-value for the regression component of participants employees is 0.500 and 13.477 respectively with corresponding significance levels (p-value) of 0.000. From the above statistics, the r-squared indicates that the regression model for the independent predictors explains about 50% of the variation in the dependent variable (job performance). The F-value for the regression component suggest that 13.5% of respondent employees job performance can be attributed to their EI and CI levels. With a p-values less than the conventional significance level of 0.05 suggest that the model findings is not by chance and the predictors (EI and CI) can be considered as having some impact on the dependent variable (Job Satisfaction) of TaTU employees.

The sum of square and mean of squares in the Two-Way ANOVA also indicates how spread out our data as well as the variation in their distribution. From the table Sum of Square and Mean of Square in table 2.2 is 31.163 and 15.582 respectively, while in table 2.3 they are 32.705 and 16.353 respectively. Hence, the Null hypothesis is disproved, as the regression suggest EI/CI do have impact on Employee Job Satisfaction/Performance.

Figure 1.9: Histogram of Regression Standardized Residual for X2 (Job Performance)

Histogram
Dependent Variable: Job Performance

Mean = 2.08E-17
Std. Dev. = 0.965
N = 30
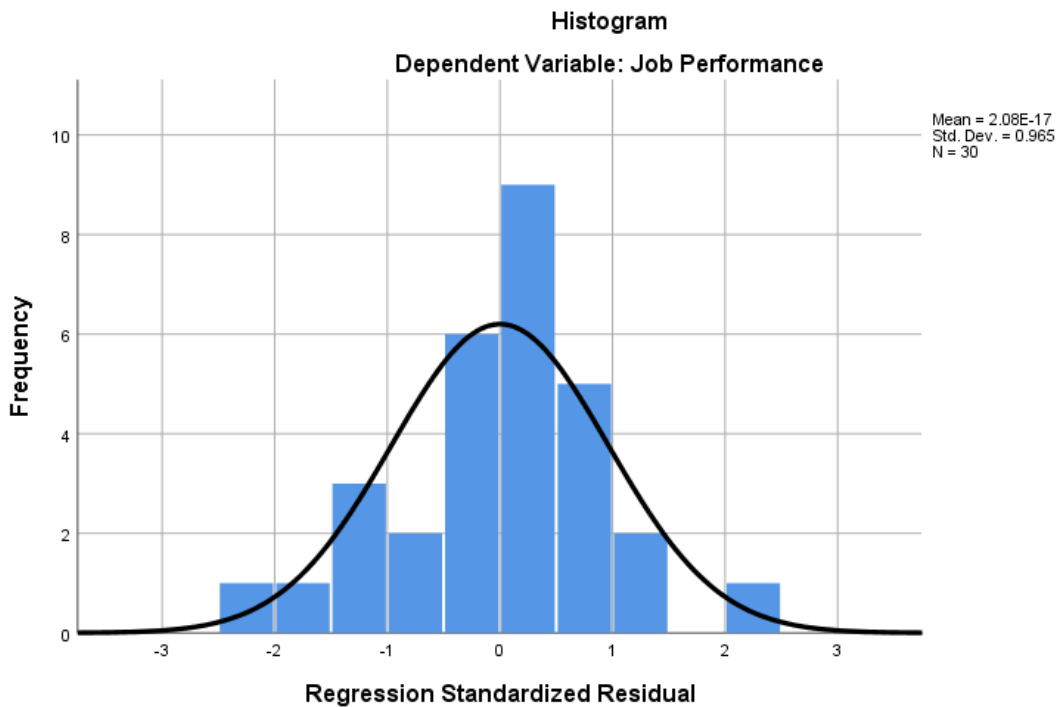
To determine normality of distribution of employees job satisfaction in lieu their CI and EI level, the histogram above which shows a normal distribution, with a mean distribution of 2.08, with a marginal error of -17 and a standard deviation of 0.965. from the diagram the distribution shows the shape of a bell curve hence data residuals was normally distributed which suggest the error in the regression model is relatively low.

Figure 2.0: Scatter Plot of Unstandardized Predicted Value (EI/CI) and X2(Job Performance)

Simple Scatter with Fit Line of Job Performance by Unstandardized Predicted Value
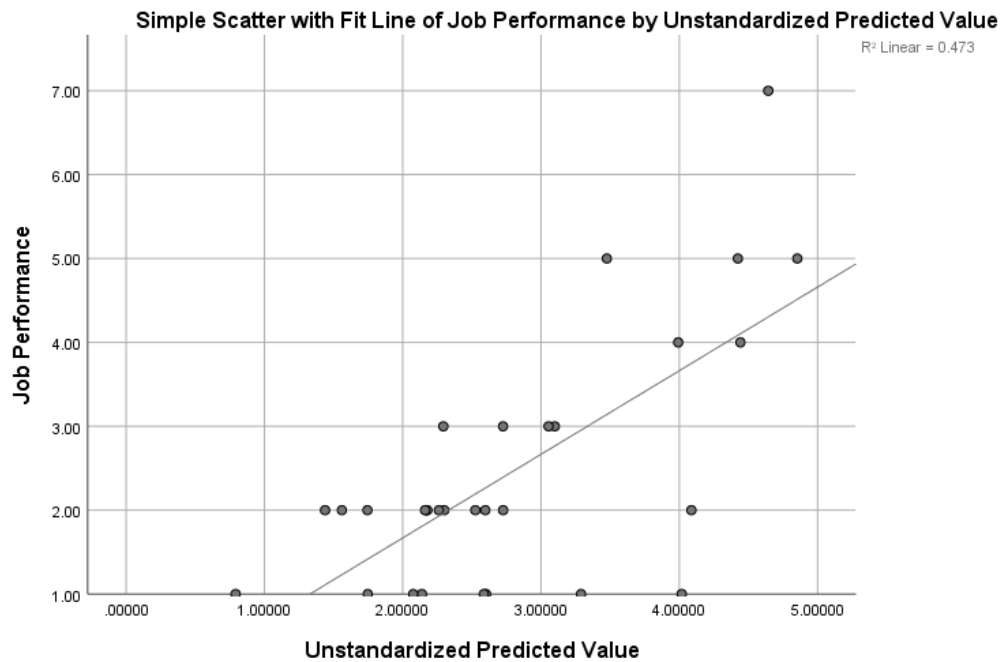
The scatter plot above indicates a linearity with r-squared of 0.44, which shows that there is a 44% linearity of the Dependent Variable (Job satisfaction) on the two independent predictors (CI and EI). As indicated in the previous scatter plot, also here it can be deduced that apart from a few respondents the rest of the respondent's job performance level moves in unison with increasing CI and EI with respondents having a job satisfaction level. Again outliers can be as a result of other factors external to the variables used in our model for examining employees job performance such as income and allowances. Again, this findings pertains to faculties and department studied and can't be generalized for the whole university unless adequate sample is used for the study though similar findings is very likely.

4.8 Impediments of EI and CI development according to respondents

As part of the study research questions, it sought to find out what could be the possible barriers to CI and EI development among employees of the study institution, Tamale Technical University. 6 respondents were selected randomly and interviewed and they proposed the following reasons;

Respondent One (1):

> *"The University never address the need of CI and EI during our orientation as workers nor even organize workshops to train us in developing our CI and EI".*

Respondent Two (2)

> *"Some of the Employees by nature easily get angry and also feel like their tribes are better than other employees because it is their region and they are the majority".*

Respondent Three (3)

"In this university some people especially the top position holders feel they are above everyone else and look down upon us and they don't tolerate other people views especially if it goes against their ethnic believes".

Respondent Four (4)

"Most of my colleagues lack empathy, they don't assume on themselves the problems of others and people also lack the motivation and zeal to associate and learn about other colleagues culture, so they don't learn about cultural values of other colleagues".

Respondent Five (5)

"Some colleagues only care about their own feelings and interest, they feel their feelings matter than others and therefore do not pay attention to the emotions of others and also some of colleagues do not trust or want to associate with other cultures because they either grew up with bad information about such ethnic group or misinformed about them".

Respondent Six (6)

"Most colleagues can't exercise patient and too quick to draw conclusions with taking time to understand the feelings of others and people also hold some biased ideas and perceptions about some tribes in the university".

The above responses reveals the opinions of what some of the respondents holds as to why most colleagues are not able to develop their CI and EI and this opinions is also in line with the findings of (Agala A.L 2020) about the various triggers of organizational conflicts in the Tamale Technical University. This does not only cause tension, but employees who felt abused due their differences can be emotionally disturbed and lose satisfaction for their jobs and may perform poorly which affects overall organizational productivity.

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[2] **Note:** Experts of emotional and cultural intelligence are of the contention that attaining even the lowest score be it in any of the four factors or global trait score doesn't mean the respondent lack EI or CI but they are limited by external and internal factors within their environment, or historical circumstances especially during their infancy and upbringing which prevents them from fully exploring their EI and CI abilities.

CHAPTER FIVE (5)
SUMMARY OF FINDINGS, CONLCUSION AND RECOMMENDATIONS
5.0 SUMMARY OF FINDINGS

The study focus was to established how EI & CI influence employees Job Satisfaction and Performance in 'multitrait organizations' as well as determine any existing relationship between EI and CI and if so what effects or impact do they have on employees job satisfaction and performance. The study was conducted at the Tamale Technical University selected as the case of study. Qualitative and Quantitative research design was used. A total of 30 respondents were selected using purposive sampling technique, which according to scholars like (Sproul N.L 1995) yield better representativeness of study population. Out of the 30 selected (11) 37% were females and (19) 63% were males of which 4 were Deans of faculties, 4 HODS, 4 Directors and 20 Administrative assistants working in various departments and faculties. The Trait Emotional Intelligence Questionnaire Short Form (TEIQue SF/360-SF) and Cultural Intelligence Scale (CQS)/CQS Observer report was the ideal EI and CI measuring scale used to gather participants EI and CI levels and the Culture and Emotional Nexus Questionnaire was developed to ascertain the relationship between EI/CI and Employee Job Satisfaction & /Performance at the Tamale Technical University.

A bivariate correlation analysis of the various questionnaires releveled relatively average to higher significance which is duly captured in the appendix 1, 2, and 3. Though the sample were small, Reliability was high, with Cronbach alpha ranging from 0.60 to 0.95 for TEIQue and CQS. However some variables like (CENQ) had low and average correlation and reliability scores which however doesn't distort the validity and reliability of the overall research in a significant level.

Results obtained from the study findings suggests that, there is some correlation between EI and CI and both CI and CI have fair influence on employee job satisfaction and job performance as indicated in the regression model, table 2.2 and 2.3 and its scatter plots.

Secondly the study also sought to determine the EI & CI levels between senior member position holders (ST) and subordinates (S) in the university. Data findings, though from a very low sample suggests that Senior member position holders of the university possesses relatively high emotional intelligence but not cultural intelligence than their subordinates as captured in figure 1.1, 1.3, 1.4 and 1.5.

Also, three null hypothesis were formulated. the first proclaimed that's there is no relationship between EI and CI. The second and third hypothesis argued that EI and CI have no relation/impact to employee job satisfaction & performance respectively. Findings from data analysis, though from a very low sample size also seems to suggest that there is significant correlation between EI and CI hence disproving the Null hypothesis in favor of the Research hypothesis.

A bivariate correlation was executed for Job Satisfaction and performance against EI and CI for both Subordinate (ST) and Superiors (S). Results also suggest a positive correlations among them as captured in table 1.5.

Also to ascertain **EI and CI** as predictors of Employee **Job Satisfaction and performance** a linear regression was carried out and using a regression Model and a Two Way ANOVA, results

suggest that EI and CI can be positive predictors of employee Job performance and Satisfaction as captured in table 2.2 and 2.3.

Finally, obstacles that's curtails development of employees cultural intelligence and emotional intelligence was another question raised in this study. 6 respondents were briefly interviewed about their opinions on what are the likely barriers to their EI and CI development, and they gave a wide range of responses ranging from personal and cultural biases, ethnocentrism lack of empathy to name but a few (see ch.4, p.67). Participants also made comments about the intentional discrimination and biases that occurs frequently. One of the employees said

> *"For more than a year, I haven't received my salary and allowance because someone intentionally didn't forward my documents for verification at the Controller and Accountant General Department".* Another Employee said *"If you are not of the dominant tribe, your request maybe delayed or not given any attention at all and your concerns and worries may not be addressed".*

It noteworthy to state that; the findings from this study is from the sample of 30 respondents; and the findings cannot in totality be generalized for the whole university unless much greater sample is used, but this does not also distort the fact of the findings as participants were carefully selected in order of their position and years of service in the university and their responses shows that there is indeed some challenges that comes with emotional and cultural biases which can be attributed to issues of EI and CI which goes a long way to affect employees Job satisfaction and performance levels in TaTU.

Also; the findings in this study is similar to the findings of research conducted by other researchers in similar field and topic with very high sample sizes which gives some degree of credit to the findings of this study.

5.1 CONLCUSION

CI and EI are two important factors that can impact employee job satisfaction and job performance. EI refers to an individual ability to understand and manage his/her own emotions as well as manage the emotions of others, while CI on the other hand refers to the ability of an individual to recognize and adapt to different cultural contexts. It entails also having the zeal and curiosity to interact with new and unfamiliar cultures. Numerous researchers have conducted studies and found positive relationship between EI and employee job satisfaction/performance. A study by (Wong C.S & Law K.S, 2002) revealed that, "employees with higher rate of EI had better job performance and satisfaction" than those who had very low EI rates. Similarly, a study conducted by (Jordan P.J and Troth A.C 2004) found that EI has a positive correlation to "job satisfaction/performance and organizational commitment". In the same light, like EI and Employees Job Satisfaction/Performance several researchers have conducted studies on EI and its positive relation to employees job satisfaction/performance. A study by (Earley P.C and Ang S. 2003) revealed a positive correlation between CI and employees job satisfaction & performance in multicultural organizations. Similarly it was revealed in a study by (Thomas D. C. and Inkson K 2004) that, employee Job Satisfaction and Performance in *"multitrait"* organization are highly influenced by CI. Moreover, diverse scholars have suggested that EI and CI are complementary skills that have the potentials to enhance job satisfaction/performance at work. For example, when (Ang S. and Van Dyne L. 2008) conducted a

study in 2008, they found that employees with high rate of EI and CI had relatively high levels of Job Satisfaction/performance than those with low levels of CI and EI.

This research in Tamale Technical University also suggest that there is some correlation and impact of EI and CI on employee Job Satisfaction/Performance in higher institutions of learning encompassing diverse individuals and employees. Given the fact that EI and CI are relevant factors in employee job satisfaction and job performance, companies, institutions both private and public can strive to put in place the necessary facilities and trainings to promote the development of EI and CI skills among their employees. This can be done through various means such as coaching, mentoring, training programs and orientations. Additionally, companies may also consider the possibility of incorporating EI and CI skills in their hiring criteria and as part of their in-service training programme for potential new employees.

However, is noteworthy to be aware that relationship between EI, CI, and job satisfaction/performance may vary significantly across diverse cultural contexts. For example, it was discovered in a study conducted by (Gohm C.L & Clore G.L 2002) that the relationship between EI and job satisfaction was way stronger in individualistic cultures than it is in collectivistic cultures. In conclusion, the Intelligence Quotient (IQ) though a relevant factor in the measurement of human competence, the EI and CI are social factors that may have more impact employee job satisfaction and job performance. Companies, institutions, NGOs can consider promoting the development of these skills among their personnel.

5.2 RECOMMENDATIONS

Though the study was conducted with very low samples due to some limitation, it has highlighted that, EI and CI have some impact on employees job satisfaction and performance, in this regards the following are some recommendations proposed;

i. CI and EI may be considered a factor in the hiring criteria at the TaTU and other institutions, via brief EI and CI tests.

ii. TaTU and other organization may also consider organizing EI and CI training workshops as part of employee orientation and employee in-service training tools.

iii. Erasmus-ISS may also consider the possibility of in putting place coaching and training activities on EI and CI taking into considerations how diverse and multicultural the institution is in terms of the variety of nationals it brings together both students and personnel. This can further increase diversity management and improve cross-cultural interactions.

5.3 SUGGESTIONS FOR FUTURE RESEARCH

The following suggestion should be considered in future researches;

i. It is important for future research to explore the relationship between CI EI, and other organizational outcomes in different cultural contexts.

ii. Additionally, the impact of cultural intelligence training in diverse work environments should be further explored.

Word Count:

Abstract, Chapter 1-5 : **14,667.**

Overall Word Count: **18,372.**

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³ **Note:** Findings from this research suggest that having high EI and CI doesn't necessarily guarantee an employee job satisfaction/performance, as there are other predictors that contributes to employee job satisfaction and performance which is not enlisted in our variable choice, hence the reason as to why despite some employees having high EI and CI levels they show low job satisfaction and performance levels as shown in the scatter plot.

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Appendix 1: Test of Validity-Bivariate Correlation Analysis for CENQ

Correlations

		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	Total
X1	Pearson Correlation	1	.687**	-.347	.570**	.054	-.002	-.186	.338	-.208	.115	.168	.142	.013	.385*
	Sig. (2-tailed)		.000	.061	.001	.779	.990	.326	.068	.269	.547	.375	.453	.945	.036
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X2	Pearson Correlation	.687**	1	-.212	.615**	-.130	-.174	-.330	.210	-.292	.070	.158	.221	.040	.299
	Sig. (2-tailed)	.000		.260	.000	.494	.359	.075	.266	.118	.712	.405	.240	.833	.108
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X3	Pearson Correlation	-.347	-.212	1	-.328	-.083	.063	.320	-.088	.411*	.011	.018	.258	.266	.285
	Sig. (2-tailed)	.061	.260		.077	.662	.740	.084	.646	.024	.953	.925	.169	.155	.127
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X4	Pearson Correlation	.570**	.615**	-.328	1	-.186	-.066	-.125	.134	-.234	.473**	.348	.181	.087	.447*
	Sig. (2-tailed)	.001	.000	.077		.326	.729	.509	.480	.212	.008	.059	.338	.647	.013
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X5	Pearson Correlation	.054	-.130	-.083	-.186	1	.779**	.300	.296	.270	-.036	-.275	-.293	.173	.320
	Sig. (2-tailed)	.779	.494	.662	.326		.000	.107	.112	.149	.851	.141	.116	.362	.084
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X6	Pearson Correlation	-.002	-.174	.063	-.066	.779**	1	.613**	.290	.204	.162	-.053	-.086	.266	.552**
	Sig. (2-tailed)	.990	.359	.740	.729	.000		.000	.120	.279	.392	.781	.651	.155	.002
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X7	Pearson Correlation	-.186	-.330	.320	-.125	.300	.613**	1	.052	.145	.244	.023	.092	.218	.458*
	Sig. (2-tailed)	.326	.075	.084	.509	.107	.000		.787	.446	.194	.906	.627	.248	.011

	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X8	Pearson Correlation	.338	.210	-.088	.134	.296	.290	.052	1	.231	.048	-.301	-.216	.469**	.433*
	Sig. (2-tailed)	.068	.266	.646	.480	.112	.120	.787		.220	.800	.107	.251	.009	.017
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X9	Pearson Correlation	-.208	-.292	.411*	-.234	.270	.204	.145	.231	1	.047	-.187	.045	.370*	.373*
	Sig. (2-tailed)	.269	.118	.024	.212	.149	.279	.446	.220		.805	.322	.812	.044	.042
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X10	Pearson Correlation	.115	.070	.011	.473**	-.036	.162	.244	.048	.047	1	.267	.126	.150	.532**
	Sig. (2-tailed)	.547	.712	.953	.008	.851	.392	.194	.800	.805		.154	.508	.428	.002
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X11	Pearson Correlation	.168	.158	.018	.348	-.275	-.053	.023	-.301	-.187	.267	1	.826**	-.440*	.336
	Sig. (2-tailed)	.375	.405	.925	.059	.141	.781	.906	.107	.322	.154		.000	.015	.069
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X12	Pearson Correlation	.142	.221	.258	.181	-.293	-.086	.092	-.216	.045	.126	.826**	1	-.290	.422*
	Sig. (2-tailed)	.453	.240	.169	.338	.116	.651	.627	.251	.812	.508	.000		.120	.020
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
X13	Pearson Correlation	.013	.040	.266	.087	.173	.266	.218	.469**	.370*	.150	-.440*	-.290	1	.428*
	Sig. (2-tailed)	.945	.833	.155	.647	.362	.155	.248	.009	.044	.428	.015	.120		.018
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Total	Pearson Correlation	.385*	.299	.285	.447*	.320	.552**	.458*	.433*	.373*	.532**	.336	.422*	.428*	1
	Sig. (2-tailed)	.036	.108	.127	.013	.084	.002	.011	.017	.042	.002	.069	.020	.018	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30

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

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 2: Test of Validity-Bivariate Analysis for TEIQue

Correlations

		t1	t2	t3	t4	t5	t6	t7	t8	t9	t10	t11	t12	t13	t14	t15	t16	t17	t18	t19	t20	t21	t22	t23	t24	t25	t26	t27	t28	t29	t30	Total
T1	Pearson Correlation	1	-.061	-.056	-.116	.185	.374*	-.030	-.245	.104	-.071	.042	.163	.302	.378*	-.038	.180	.025	.286	.037	.036	.138	.374*	.342	.241	.094	-.107	.173	-.041	.015	.270	.297
	Sig. (2-tailed)		.749	.768	.541	.327	.042	.873	.192	.586	.708	.827	.390	.105	.040	.843	.342	.898	.125	.846	.852	.468	.042	.062	.200	.623	.574	.361	.830	.937	.149	.111
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
T2	Pearson Correlation	-.061	1	.088	.233	.127	.252	-.324	.415*	.105	.140	.234	-.409*	.139	.096	.087	.109	.000	-.004	.083	.138	.065	-.043	-.019	.204	.108	-.037	.182	.114	.137	.067	.202
	Sig. (2-tailed)	.749		.643	.216	.504	.179	.080	.023	.582	.461	.213	.025	.464	.612	.647	.567	1.000	.983	.662	.467	.735	.822	.923	.279	.570	.846	.335	.549	.469	.726	.283
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
T3	Pearson Correlation	-.056	.088	1	-.071	.180	.420*	.174	.007	.715**	-.011	.260	.292	-.127	.236	.328	.030	.177	.260	.421*	.546**	.368*	.148	.241	.431*	.053	.008	.472**	.096	.530**	.219	.555**
	Sig. (2-tailed)	.768	.643		.708	.341	.021	.357	.973	.000	.956	.166	.117	.503	.209	.077	.873	.349	.165	.021	.002	.045	.435	.200	.017	.780	.965	.008	.614	.003	.245	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
T4	Pearson Correlation	-.116	.233	-.071	1	-.025	-.076	-.121	.087	.155	.160	.035	.069	.140	-.180	-.112	.230	-.147	-.299	-.060	.030	-.050	.097	.012	.201	.030	.011	.085	.135	-.009	.039	.076
	Sig. (2-tailed)	.541	.216	.708		.895	.690	.523	.649	.413	.398	.854	.718	.460	.342	.556	.221	.439	.109	.753	.876	.793	.611	.951	.281	.874	.955	.655	.476	.963	.836	.689

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	Statistic																															
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
T5	Pearson Correlation	.185	.127	.180	-.025	1	.082	.047	.603**	.135	.581**	-.120	.313	.440*	.389*	.226	.080	.418*	.435*	-.072	-.074	-.129	.320	.069	.211	.645**	.267	.020	.148	.098	-.111	.419*
	Sig. (2-tailed)	.327	.504	.341	.895		.668	.803	.000	.477	.001	.527	.092	.015	.034	.231	.674	.022	.016	.705	.696	.498	.085	.716	.263	.000	.153	.916	.436	.608	.559	.021
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t6	Pearson Correlation	.374*	.252	.420*	-.076	.082	1	-.201	-.024	.573**	-.012	.090	-.069	.260	.330	.456*	.354	.067	.305	.507**	.539**	.548**	.239	.498**	.628**	.115	.143	.549**	.100	.537**	.738**	.705**
	Sig. (2-tailed)	.042	.179	.021	.690	.668		.287	.900	.000	.951	.636	.718	.166	.075	.015	.055	.725	.101	.004	.002	.002	.204	.005	.000	.545	.450	.002	.598	.002	.000	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t7	Pearson Correlation	-.030	-.324	.174	-.121	.047	-.201	1		.194	.122	.210	.113	.347	-.094	-.041	-.209	.181	-.031	.081	.005	.078	-.010	.064	.257	-.064	.110	-.156	-.363*	.006	-.229	.109
	Sig. (2-tailed)	.873	.080	.357	.523	.803	.287		.304	.521	.266	.550	.060	.619	.829	.268	.339	.869	.671	.977	.681	.960	.736	.171	.739	.563	.411	.924	.049	.975	.224	.566
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t8	Pearson Correlation	-.245	.415*	.007	.087	.603**	-.024	.194	1	-.006	.794**	-.180	.064	.385*	.079	.190	.246	.154	.261	-.106	-.122	-.084	.010	.128	.085	.619**	.123	-.106	.415*	.077	-.124	.288
	Sig. (2-tailed)	.192	.023	.973	.649	.000	.900	.304		.974	.000	.342	.737	.035	.680	.314	.190	.417	.164	.577	.522	.658	.956	.499	.656	.000	.517	.579	.023	.687	.512	.123
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t9	Pearson Correlation	.104	.105	.715**	.155	.135	.573**	.122	-.006	1	.010	.168	.115	.115	.032	.386*	-.007	.071	.035	.437*	.661**	.427*	.128	.501**	.736**	-.049	-.104	.809**	.067	.746**	.422*	.639**

	Sig. (2-tailed)	.586	.582	.000	.413	.477	.001	.521	.974		.957	.373	.546	.545	.867	.035	.969	.707	.855	.016	.000	.019	.500	.005	.000	.798	.584	.000	.726	.000	.020	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t10	Pearson Correlation	-.071	.140	-.011	.160	.581**	-.012	.210	.794**	.010	1	-.239	.225	.360	.044	.159	.301	.058	.281	-.226	-.180	-.105	.068	.179	.041	.573**	.295	-.185	.470**	-.038	-.176	.276
	Sig. (2-tailed)	.708	.461	.956	.398	.001	.952	.266	.000	.957		.203	.233	.050	.816	.401	.106	.759	.132	.230	.340	.581	.722	.344	.831	.001	.113	.327	.009	.842	.351	.139
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t11	Pearson Correlation	.042	.234	.260	.035	-.120	.090	.113	-.180	.168	-.239	1	-.174	-.300	-.048	.146	-.039	.195	.004	.351	.283	.168	-.194	-.047	.166	-.180	-.051	.242	-.063	.151	.089	.185
	Sig. (2-tailed)	.827	.213	.166	.854	.527	.636	.550	.342	.373	.203		.357	.107	.802	.440	.837	.301	.985	.057	.130	.374	.305	.805	.381	.341	.790	.198	.740	.426	.641	.329
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t12	Pearson Correlation	.163	-.409*	.292	.069	.313	-.069	.347	.064	.115	.225	-.174	1	.249	.238	.125	.224	.104	.359	.045	-.101	-.139	.196	.177	.133	.282	.282	-.045	.098	.019	-.130	.274
	Sig. (2-tailed)	.390	.025	.117	.718	.092	.718	.060	.737	.546	.233	.357		.184	.205	.511	.235	.586	.051	.815	.594	.462	.300	.349	.482	.130	.131	.813	.607	.919	.494	.142
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t13	Pearson Correlation	.302	.139	-.127	.140	.440*	.260	-.094	.385*	.115	.360	-.300	.249	1	.382*	.325	.407*	.208	.552**	.201	-.007	.083	.365*	.340	.443*	.556**	.013	.241	.363*	.264	.284	.522**
	Sig. (2-tailed)	.105	.464	.503	.460	.015	.166	.619	.035	.545	.050	.107	.184		.037	.080	.026	.270	.002	.287	.969	.662	.047	.066	.014	.001	.944	.200	.049	.158	.128	.003
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

t14	Pearson Correlation	.378*	.096	.236	-.180	.389*	.330	-.041	.079	.032	.044	-.048	.238	.382*	1	.152	.636**	.215	.632**	.074	-.008	.047	.619**	.064	.219	.622**	.109	.068	.447*	.080	.167	.485**
	Sig. (2-tailed)	.040	.612	.209	.342	.034	.075	.829	.680	.867	.816	.802	.205	.037		.422	.000	.254	.000	.699	.966	.803	.000	.736	.246	.000	.566	.720	.013	.675	.379	.007
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t15	Pearson Correlation	-.038	.087	.328	-.112	.226	.456*	-.209	.190	.386*	.159	.146	.125	.325	.152	1	.165	.544**	.397*	.455*	.541**	.627**	-.097	.376*	.634**	.195	.167	.523**	.092	.686**	.645**	.693**
	Sig. (2-tailed)	.843	.647	.077	.556	.231	.011	.268	.314	.035	.401	.440	.511	.080	.422		.383	.002	.030	.012	.002	.000	.612	.040	.000	.301	.377	.003	.631	.000	.000	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t16	Pearson Correlation	.180	.109	.030	.230	.080	.354	.181	.246	-.007	.301	-.039	.224	.407*	.636**	.165	1	.053	.497**	.158	.021	.159	.487**	.246	.241	.548**	.134	.023	.685**	.022	.308	.522**
	Sig. (2-tailed)	.342	.567	.873	.221	.674	.055	.339	.190	.969	.106	.837	.235	.026	.000	.383		.781	.005	.405	.911	.401	.006	.190	.199	.002	.481	.904	.000	.907	.098	.003
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t17	Pearson Correlation	.025	.000	.177	-.147	.418*	.067	-.031	.154	.071	.058	.195	.104	.208	.215	.544**	.053	1	.430*	.069	.172	.208	-.076	.027	.335	.216	.066	.181	-.088	.295	.235	.387*
	Sig. (2-tailed)	.898	1.000	.349	.439	.022	.725	.869	.417	.707	.759	.301	.586	.270	.254	.002	.781		.018	.716	.363	.269	.689	.885	.070	.251	.728	.337	.644	.114	.211	.035
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t18	Pearson Correlation	.286	-.004	.260	-.299	.435*	.305	.081	.261	.035	.281	.004	.359	.552**	.632**	.397*	.497**	.430*	1	.377*	.041	.234	.427*	.201	.262	.549**	.116	.084	.310	.162	.233	.597**

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
	Sig. (2-tailed)	.125	.983	.165	.109	.016	.101	.671	.164	.855	.132	.985	.051	.002	.000	.035	.005	.018		.040	.828	.214	.018	.287	.161	.002	.541	.659	.096	.391	.215	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t19	Pearson Correlation	.037	.083	.421*	-.060	-.072	.507**	.005	-.106	.437*	-.226	.351	.045	.201	.074	.455*	.158	.069	.377*	1	.545**	.565**	.165	.529**	.560**	-.029	-.071	.568**	.047	.548**	.553**	.592**
	Sig. (2-tailed)	.846	.662	.021	.753	.705	.004	.977	.577	.016	.230	.057	.815	.287	.699	.012	.405	.716	.040		.002	.001	.385	.003	.001	.879	.711	.001	.806	.002	.002	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t20	Pearson Correlation	.036	.138	.546**	.030	-.074	.539**	.078	-.122	.661**	-.180	.283	-.101	-.007	-.008	.541**	.021	.172	.041	.545**	1	.833**	.035	.494**	.676**	-.256	-.258	.762**	.101	.798**	.532**	.608**
	Sig. (2-tailed)	.852	.467	.002	.876	.696	.002	.681	.522	.000	.340	.130	.594	.969	.966	.002	.911	.363	.828	.002		.000	.854	.006	.000	.173	.169	.000	.594	.000	.002	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t21	Pearson Correlation	.138	.065	.368*	-.050	-.129	.548**	-.010	-.084	.427*	-.105	.168	-.139	.083	.047	.627**	.159	.208	.234	.565**	.833**	1	.024	.581**	.568**	-.174	-.272	.581**	.179	.671**	.647**	.604**
	Sig. (2-tailed)	.468	.735	.045	.792	.498	.002	.960	.658	.019	.581	.374	.462	.662	.803	.000	.401	.269	.214	.001	.000		.899	.001	.001	.357	.146	.001	.345	.000	.000	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t22	Pearson Correlation	.374*	-.043	.148	.097	.320	.239	.064	.010	.128	.068	-.194	.196	.365*	.619**	-.097	.487**	-.076	.427*	.165	.035	.024	1	.117	.163	.431*	.045	.134	.456*	.004	.177	.393*
	Sig. (2-tailed)	.042	.822	.435	.611	.085	.204	.736	.956	.500	.722	.305	.300	.047	.000	.612	.006	.689	.018	.385	.854	.899		.538	.390	.017	.813	.480	.011	.982	.349	.032
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
t23	Pearson Correlation	.342	-.019	.241	.012	.069	.498**	.257	.128	.501**	.179	-.047	.177	.340	.064	.376*	.246	.027	.201	.529**	.494**	.581**	.117	1	.708**	.104	-.083	.594**	.178	.641**	.478**	.653**
	Sig. (2-tailed)	.064	.923	.200	.951	.716	.005	.171	.499	.005	.344	.805	.349	.066	.736	.040	.190	.885	.287	.003	.006	.001	.538		.000	.584	.663	.001	.345	.000	.008	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t24	Pearson Correlation	.241	.204	.431*	.201	.211	.628**	-.064	.085	.736**	.041	.166	.133	.443*	.219	.634**	.241	.335	.262	.560**	.676**	.568**	.163	.708**	1	.132	-.051	.873**	.089	.878**	.587**	.831**
	Sig. (2-tailed)	.200	.279	.017	.287	.263	.000	.739	.656	.000	.831	.381	.482	.014	.246	.000	.199	.070	.161	.001	.000	.001	.390	.000		.486	.790	.000	.639	.000	.001	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t25	Pearson Correlation	.094	.108	.053	.030	.645**	.115	.110	.619**	-.049	.573**	-.180	.282	.556**	.622**	.195	.548**	.216	.549**	-.029	-.256	-.174	.431*	.104	.132	1	.139	-.100	.568**	-.047	.118	.441*
	Sig. (2-tailed)	.623	.570	.780	.874	.000	.545	.563	.000	.798	.001	.341	.130	.001	.000	.301	.002	.251	.002	.879	.173	.357	.017	.584	.486		.464	.597	.001	.804	.535	.015
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t26	Pearson Correlation	-.107	-.037	.008	.011	.267	.143	-.156	.123	-.104	.295	-.051	.282	.013	.109	.167	.134	.066	.116	-.071	-.258	-.272	.045	-.083	-.051	.139	1	-.224	-.128	-.089	-.015	.095
	Sig. (2-tailed)	.574	.846	.965	.955	.153	.450	.411	.517	.584	.113	.790	.131	.944	.566	.377	.481	.728	.541	.711	.169	.146	.813	.663	.790	.464		.234	.501	.640	.937	.618
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t27	Pearson Correlation	.173	.182	.472**	.085	.020	.549**	-.018	-.106	.809**	-.185	.242	-.045	.241	.068	.523**	.023	.181	.084	.568**	.762**	.581**	.134	.594**	.873**	-.100	-.224	1	.051	.900**	.514**	.672**

	Sig. (2-tailed)	.361	.335	.008	.655	.916	.002	.924	.579	.000	.327	.198	.813	.200	.720	.003	.904	.337	.659	.001	.000	.001	.480	.001	.000	.597	.234		.789	.000	.004	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t28	Pearson Correlation	-.041	.114	.096	.135	.148	.100	.363*	.415*	.067	.470**	-.063	.098	.363*	.447*	.092	.685**	-.088	.310	.047	.101	.179	.456*	.178	.089	.568**	-.128	.051	1	.051	.064	.405*
	Sig. (2-tailed)	.830	.549	.614	.476	.436	.598	.049	.023	.726	.009	.740	.607	.049	.013	.631	.000	.644	.096	.806	.596	.344	.011	.345	.639	.001	.501	.789		.791	.738	.026
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t29	Pearson Correlation	.015	.137	.530**	-.009	.098	.537**	.006	.077	.746**	-.038	.151	.019	.264	.080	.686**	.022	.295	.162	.548**	.798**	.671**	.004	.641**	.878**	-.047	-.089	.900**	.051	1	.517**	.723**
	Sig. (2-tailed)	.937	.469	.003	.963	.608	.002	.975	.687	.000	.842	.426	.919	.158	.675	.000	.907	.114	.391	.000	.000	.000	.982	.000	.000	.804	.640	.000	.791		.003	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
t30	Pearson Correlation	.270	.067	.219	.039	-.111	.738**	-.229	-.124	.422*	-.176	.089	-.130	.284	.167	.645**	.308	.233	.233	.553**	.532**	.647**	.177	.478**	.587**	.118	-.015	.514**	.064	.517**	1	.632**
	Sig. (2-tailed)	.149	.726	.245	.836	.559	.000	.224	.512	.020	.351	.641	.494	.128	.379	.000	.098	.215	.215	.002	.002	.000	.349	.008	.001	.535	.937	.004	.738	.003		.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Total1	Pearson Correlation	.297	.202	.555**	.076	.419*	.705**	.109	.288	.639**	.276	.185	.274	.522**	.485**	.693**	.522**	.383*	.597**	.597**	.602**	.604**	.393*	.653**	.831**	.441*	.095	.672**	.405*	.723**	.632**	1
	Sig. (2-tailed)	.111	.283	.001	.689	.021	.000	.566	.123	.000	.139	.329	.142	.003	.007	.000	.003	.035	.000	.001	.000	.000	.032	.000	.000	.015	.618	.000	.026	.000	.000	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

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

Appendix 3: Test of Validity-Bivariate Analysis for CQS

Correlations

		CQS_1	CQS_2	CQS_3	CQS_4	CQS_5	CQS_6	CQS_7	CQS_8	CQS_9	CQS_10	CQS_11	CQS_12	CQS_13	CQS_14	CQS_15	CQS_16	CQS_17	CQS_18	CQS_19	CQS_20	Global CQS
CQS_1	Pearson Correlation	1	.717**	.732**	.628**	.274	.157	.163	.244	.207	.314	.028	.354	.315	.323	.401*	.170	.439*	.402*	.242	.234	.603**
	Sig. (2-tailed)		.000	.000	.000	.143	.408	.390	.194	.271	.091	.881	.055	.090	.082	.028	.369	.015	.028	.197	.214	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_2	Pearson Correlation	.717**	1	.696**	.805**	.445*	.266	.246	.319	.327	.305	.052	.351	.321	.337	.448*	.363*	.562**	.490**	.419*	.309	.726**
	Sig. (2-tailed)	.000		.000	.000	.014	.156	.190	.085	.078	.101	.783	.057	.083	.069	.013	.049	.001	.006	.021	.096	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_3	Pearson Correlation	.732**	.696**	1	.781**	.193	.030	.097	.323	.148	.316	.195	.246	.261	.182	.338	.136	.449*	.455*	.380*	.181	.582**
	Sig. (2-tailed)	.000	.000		.000	.307	.874	.611	.081	.437	.089	.302	.190	.163	.336	.068	.473	.013	.012	.038	.338	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_4	Pearson Correlation	.628**	.805**	.781**	1	.227	.163	.077	.254	.085	.227	.129	.287	.234	.232	.332	.107	.390*	.319	.235	.177	.549**

	Sig. (2-tailed)	.000	.000	.000		.227	.391	.684	.175	.653	.227	.497	.124	.214	.217	.073	.572	.033	.086	.210	.349	.002
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_5	Pearson Correlation	.274	.445*	.193	.227	1	.663**	.764**	.773**	.789**	.654**	.153	.052	.270	.457*	.249	.299	.668**	.395*	.390*	.551**	.775**
	Sig. (2-tailed)	.143	.014	.307	.227		.000	.000	.000	.000	.000	.419	.784	.149	.011	.185	.108	.000	.031	.033	.002	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_6	Pearson Correlation	.157	.266	.030	.163	.663**	1	.669**	.543**	.680**	.633**	-.039	-.070	.234	.216	.116	.248	.460*	.235	.172	.587**	.590**
	Sig. (2-tailed)	.408	.156	.874	.391	.000		.000	.002	.000	.000	.836	.712	.213	.253	.540	.187	.011	.212	.364	.001	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_7	Pearson Correlation	.163	.246	.097	.077	.764**	.669**	1	.789**	.850**	.697**	.437*	.157	.385*	.317	.274	.116	.407*	.203	.132	.514**	.678**
	Sig. (2-tailed)	.390	.190	.611	.684	.000	.000		.000	.000	.000	.016	.406	.036	.088	.143	.542	.026	.281	.485	.004	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_8	Pearson Correlation	.244	.319	.323	.254	.773**	.543**	.789**	1	.666**	.713**	.318	.187	.215	.330	.129	.194	.586**	.354	.246	.523**	.720**
	Sig. (2-tailed)	.194	.085	.081	.175	.000	.002	.000		.000	.000	.087	.322	.255	.074	.495	.303	.001	.055	.189	.003	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

CQS_9	Pearson Correlation	.207	.327	.148	.085	.789**	.680**	.850**	.666**	1	.705**	.419*	.237	.504**	.453*	.463*	.198	.521**	.257	.287	.510**	.756**
	Sig. (2-tailed)	.271	.078	.437	.653	.000	.000	.000	.000		.000	.021	.207	.005	.012	.010	.294	.003	.170	.124	.004	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_10	Pearson Correlation	.314	.305	.316	.227	.654**	.633**	.697**	.713**	.705**	1	.276	.181	.233	.126	.280	.229	.511**	.283	.238	.532**	.693**
	Sig. (2-tailed)	.091	.101	.089	.227	.000	.000	.000	.000	.000		.140	.337	.216	.506	.134	.225	.004	.130	.206	.003	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_11	Pearson Correlation	.028	.052	.195	.129	.153	-.039	.437*	.318	.419*	.276	1	.523**	.621**	.297	.510**	-.317	.157	.004	.012	-.063	.336
	Sig. (2-tailed)	.881	.783	.302	.497	.419	.836	.016	.087	.021	.140		.003	.000	.111	.004	.088	.407	.985	.951	.741	.070
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_12	Pearson Correlation	.354	.351	.246	.287	.052	-.070	.157	.187	.237	.181	.523**	1	.619**	.463**	.679**	-.053	.120	.132	-.047	-.117	.395*
	Sig. (2-tailed)	.055	.057	.190	.124	.784	.712	.406	.322	.207	.337	.003		.000	.010	.000	.779	.527	.488	.804	.538	.031
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_13	Pearson Correlation	.315	.321	.261	.234	.270	.234	.385*	.215	.504**	.233	.621**	.619**	1	.565**	.826**	-.139	.272	.037	.032	.021	.522**

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	Sig. (2-tailed)	.090	.083	.163	.214	.149	.213	.036	.255	.005	.216	.000	.000		.001	.000	.465	.146	.847	.867	.911	.003
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_14	Pearson Correlation	.323	.337	.182	.232	.457*	.216	.317	.330	.453*	.126	.297	.463**	.565**	1	.567**	.059	.295	.384*	.271	.285	.572**
	Sig. (2-tailed)	.082	.069	.336	.217	.011	.253	.088	.074	.012	.506	.111	.010	.001		.001	.756	.114	.036	.148	.127	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_15	Pearson Correlation	.401*	.448*	.338	.332	.249	.116	.274	.129	.463*	.280	.510**	.679**	.826**	.567**	1	.005	.307	.109	.156	.164	.565**
	Sig. (2-tailed)	.028	.013	.068	.073	.185	.540	.143	.495	.010	.134	.004	.000	.000	.001		.977	.098	.568	.410	.386	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_16	Pearson Correlation	.170	.363*	.136	.107	.299	.248	.116	.194	.198	.229	-.317	-.053	-.139	.059	.005	1	.606**	.685**	.754**	.522**	.453*
	Sig. (2-tailed)	.369	.049	.473	.572	.108	.187	.542	.303	.294	.225	.088	.779	.465	.756	.977		.000	.000	.000	.003	.012
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_17	Pearson Correlation	.439*	.562**	.449*	.390*	.668**	.460*	.407*	.586**	.521**	.511**	.157	.120	.272	.295	.307	.606**	1	.710**	.745**	.575**	.811**
	Sig. (2-tailed)	.015	.001	.013	.033	.000	.011	.026	.001	.003	.004	.407	.527	.146	.114	.098	.000		.000	.000	.001	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

|																						
CQS_18	Pearson Correlation	.402*	.490**	.455*	.319	.395*	.235	.203	.354	.257	.283	.004	.132	.037	.384*	.109	.685**	.710**	1	.889**	.548**	.659**
	Sig. (2-tailed)	.028	.006	.012	.086	.031	.212	.281	.055	.170	.130	.985	.488	.847	.036	.568	.000	.000		.000	.002	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_19	Pearson Correlation	.242	.419*	.380*	.235	.390*	.172	.132	.246	.287	.238	.012	-.047	.032	.271	.156	.754**	.745**	.889**	1	.557**	.595**
	Sig. (2-tailed)	.197	.021	.038	.210	.033	.364	.485	.189	.124	.206	.951	.804	.867	.148	.410	.000	.000	.000		.001	.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
CQS_20	Pearson Correlation	.234	.309	.181	.177	.551**	.587**	.514**	.523**	.510**	.532**	-.063	-.117	.021	.285	.164	.522**	.575**	.548**	.557**	1	.641**
	Sig. (2-tailed)	.214	.096	.338	.349	.002	.001	.004	.003	.004	.003	.741	.538	.911	.127	.386	.003	.001	.002	.001		.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
TotalCQS	Pearson Correlation	.603**	.726**	.582**	.549**	.775**	.590**	.678**	.720**	.756**	.693**	.336	.395*	.522**	.572**	.565**	.453*	.811**	.659**	.595**	.641**	1
	Sig. (2-tailed)	.000	.000	.001	.002	.000	.001	.000	.000	.000	.000	.070	.031	.003	.001	.001	.012	.000	.000	.001	.000	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

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

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 5: Diagram of CQS 4 factor and Global CQS
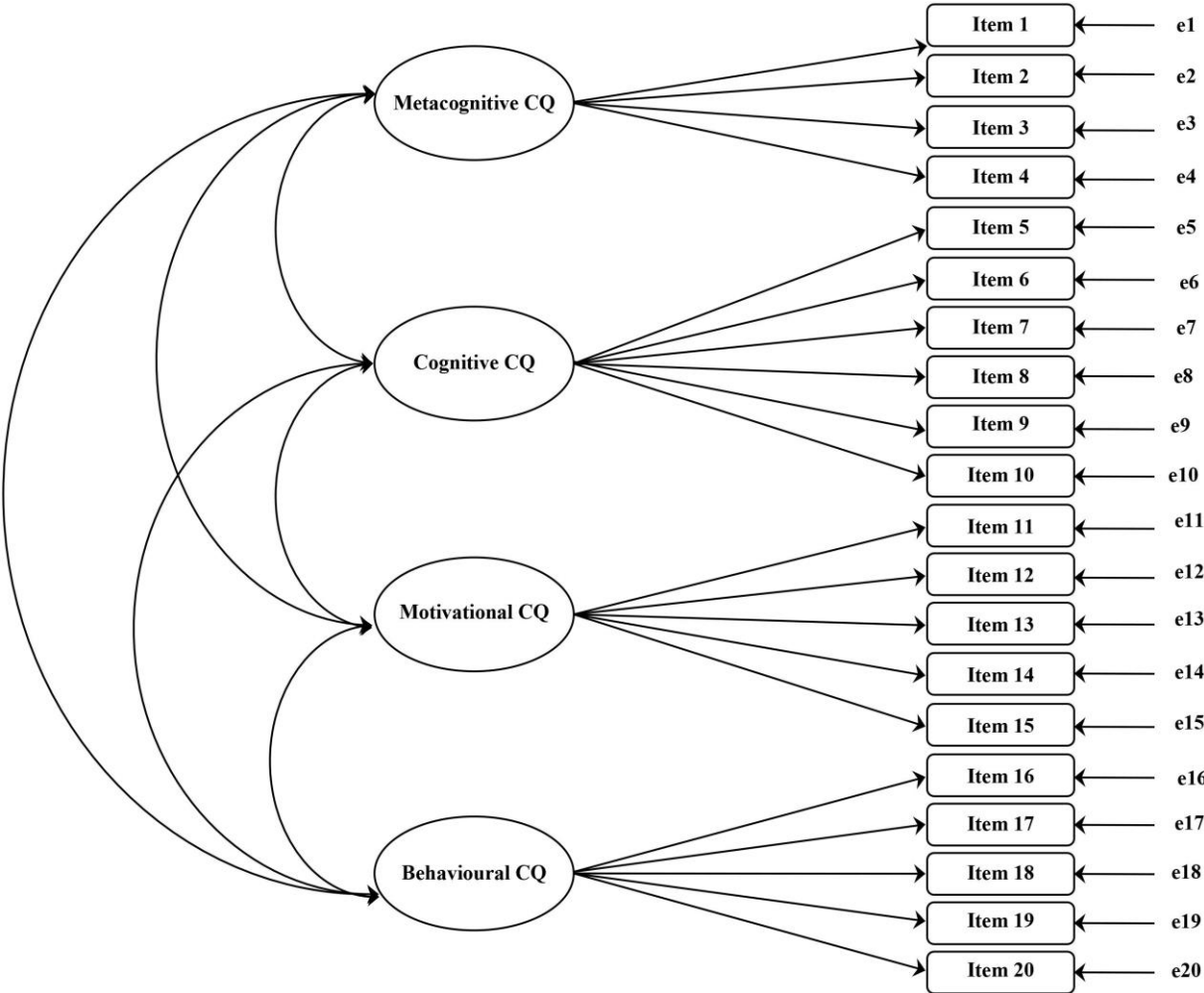
Appendix 6: Culture and Emotion Nexus Questionnaire (CENQ)

QUESTIONNAIRE
Cultural and emotional Intelligence Nexus Questionnaire (CENQ)

As Part of my **MA in Governance and Development Policy** at the Erasmus University Rotterdam (Erasmus-ISS), The Hague. I am conducting research on Emotional Intelligence (EI) and Cultural Intelligence (CI) and their role in general organizational outputs and employee behaviours. I will appreciate if you could please spare time to complete the following questionnaire (CENQ, CQS, TEIQue). Your Identity & information obtained in connection to this study is going to be treated with outmost confidentiality.

Section A: please circle and fill as applicable.

Gender   a) Male   b) Female   Educational Level: _____

Age: a) 19-20   b) 21-30   c) 31-40   d) 41-50   e) 51-60   f) 61-70

Position: _____   Faculty:_____

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 7

Completely   Completely

Disagree   Agree

Section B: Please to what extent do you agree or disagree with these statements

1	When it comes to job satisfaction, I am **always satisfied** with my job	1	2	3	4	5	6	7
2	I always **perform efficiently at all times** in my job	1	2	3	4	5	6	7
3	I sometimes feel or have the intention of quitting my job	1	2	3	4	5	6	7
4	I am very pleased with the working conditions of this institution and will love to work there for long time.	1	2	3	4	5	6	7
5	I sometimes find it **difficult to work in a team** of different cultures	1	2	3	4	5	6	7
6	I sometimes cannot act well with colleagues who don't share same culture, religion and beliefs with me	1	2	3	4	5	6	7
7	I can only bond and work **well** with people of my tribe and culture	1	2	3	4	5	6	7
8	I get emotionally upset/angry when people criticized my culture or do something not in accordance to it values at work	1	2	3	4	5	6	7
9	Apart from religious and cultural values I have my **personal principles** which when people don't follow I get moody or emotional	1	2	3	4	5	6	7
10	I believe employees with the same culture, religious beliefs etc. can perform efficiently and produce greater output than a team of different cultures.	1	2	3	4	5	6	7
11	My mood (happiness or ang or sad) doesn't affect how efficiently I work and perform my duties	1	2	3	4	5	6	7
12	When I am in a bad mood (sad, depressed, angry) I still perform efficiently, it doesn't affect my performance and output rate.	1	2	3	4	5	6	7
13	Sometimes I get emotional & say things which is offensive to other colleagues personal and cultural principles unintentionally.	1	2	3	4	5	6	7

Section D: Please fill in your opinion

14. In your opinion why do you think people find it difficult to manage emotions of themselves and that of others.

_____

_____

15. In your opinion Why do you think people find it hard to understand, cooperate and interact with people of other culture at work: _____

_____

TEIQue-SF

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 7
Completely   **Completely**
Disagree   **Agree**

1. Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6	7
2. I often find it difficult to see things from another person's	1	2	3	4	5	6	7
3. On the whole, I'm a highly motivated person.	1	2	3	4	5	6	7
4. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5. I generally don't find life enjoyable.	1	2	3	4	5	6	7
6. I can deal effectively with people.	1	2	3	4	5	6	7
7. I tend to change my mind frequently.	1	2	3	4	5	6	7
8. Many times, I can't figure out what emotion I'm feeling.	1	2	3	4	5	6	7
9. I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10. I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11. I'm usually able to influence the way other people feel.	1	2	3	4	5	6	7
12. On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6	7
13. Those close to me often complain that I don't treat them right.	1	2	3	4	5	6	7
14. I often find it difficult to adjust my life according to the	1	2	3	4	5	6	7
15. On the whole, I'm able to deal with stress.	1	2	3	4	5	6	7
16. I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6	7
17. I'm normally able to "get into someone's shoes" and experience their emotions.	1	2	3	4	5	6	7
18. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. I'm usually able to find ways to control my emotions when I	1	2	3	4	5	6	7
20. On the whole, I'm pleased with my life.	1	2	3	4	5	6	7
21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6	7
23. I often pause and think about my feelings.	1	2	3	4	5	6	7
24. I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26. I don't seem to have any power at all over other people's	1	2	3	4	5	6	7
27. I generally believe that things will work out fine in my life.	1	2	3	4	5	6	7
28. I find it difficult to bond well even with those close to me.	1	2	3	4	5	6	7
29. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire me for being relaxed.	1	2	3	4	5	6	7

Appendix 8: TEIQue-360 Short Form (SF)

SHORT FORM TEIQUE360-SF

Before starting, please specify:

1)   How long you have known the target (in months): _____
2)   How well do you feel you know them (1 = not at all, 10 = extremely well): ___

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 7

Completely Disagree   Completely Agree

Statement	1	2	3	4	5	6	7
1. Expressing their emotions with words is not a problem for them.	1	2	3	4	5	6	7
2. They often find it difficult to see things from another person's viewpoint.	1	2	3	4	5	6	7
3. On the whole, they are highly motivated.	1	2	3	4	5	6	7
4. They usually find it difficult to regulate their emotions.	1	2	3	4	5	6	7
5. They generally don't appear to find life enjoyable.	1	2	3	4	5	6	7
6. They can deal effectively with people.	1	2	3	4	5	6	7
7. They tend to change their mind frequently.	1	2	3	4	5	6	7
8. Many times, they can't figure out what emotion they're feeling.	1	2	3	4	5	6	7
9. They believe that they have a number of good qualities.	1	2	3	4	5	6	7
10. They often find it difficult to stand up for their rights	1	2	3	4	5	6	7
11. They are usually able to influence the way other people feel.	1	2	3	4	5	6	7
12. On the whole, they have a gloomy perspective on most. things.	1	2	3	4	5	6	7
13. Those close to them often complain that they are not. treated right.	1	2	3	4	5	6	7
14. They often find it difficult to adjust their life according to the circumstances.	1	2	3	4	5	6	7
15. On the whole, they are able to deal with stress.	1	2	3	4	5	6	7
16. They often find it difficult to show affection to those close to them.	1	2	3	4	5	6	7
17. They are normally able to "get into someone's shoes" and experience their emotions.	1	2	3	4	5	6	7
18. They normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. They are usually able to find ways to control their emotions when they want to.	1	2	3	4	5	6	7
20. On the whole, they appear pleased with their life.	1	2	3	4	5	6	7
21. I would describe them as a good negotiator.	1	2	3	4	5	6	7
22. They tend to get involved in things they later wish they could get out of.	1	2	3	4	5	6	7
23. They often pause and think about their feelings.	1	2	3	4	5	6	7
24. They believe they're full of personal strengths.	1	2	3	4	5	6	7
25. They tend to "back down" even if they think they're right.	1	2	3	4	5	6	7
26. They don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6	7
27. They generally believe that things will work out fine in their life.	1	2	3	4	5	6	7
28. They generally believe that things will work out fine in their life.	1	2	3	4	5	6	7
29. Generally, they are able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire them for being relaxed.	1	2	3	4	5	6	7

Appendix 9: Four Factor CQS

CULTURAL INTELLIGENCE SCALE (CQS)

Read each statement and select the response that best describes your capabilities. Select the Answer that BEST describes you AS YOU REALLY ARE.

Use the following format:

1	2	3	4	5	6	7
Very Strongly Disagree	Strongly Disagree	Disagree	Not Decided	Agree	Strongly Agree	Very Strongly Agree

1. ... I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.   1 2 3 4 5 6 7

2. ... 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

3. ... I am conscious of the cultural knowledge I apply to cross-cultural interactions.   1 2 3 4 5 6 7

4. ... I check the accuracy of my cultural knowledge as I interact with people from different cultures.   1 2 3 4 5 6 7

5. ... I know the legal and economic systems of other cultures.   1 2 3 4 5 6 7

6. ... I know the rules (e.g. vocabulary, grammar) of other languages.   1 2 3 4 5 6 7

7. ... I know the cultural values and religious beliefs of other cultures.   1 2 3 4 5 6 7

8. ... I know the marriage systems of other cultures.   1 2 3 4 5 6 7

9. ... I know the arts and crafts of other cultures.   1 2 3 4 5 6 7

10. ... I know the rules of expressing nonverbal behaviors in other cultures.   1 2 3 4 5 6 7

11. ... I enjoy interacting with people from different cultures.   1 2 3 4 5 6 7

12. ... I am confident that I can socialize with locals in a culture that is unfamiliar to me.   1 2 3 4 5 6 7

13. ... I am sure that I can deal with the stresses of adjusting to a culture that is new to me.   1 2 3 4 5 6 7

14. ... I enjoy living in cultures that are unfamiliar to me.   1 2 3 4 5 6 7

15. ... I am confident that I can get accustomed to the shopping conditions in a different culture.   1 2 3 4 5 6 7

16. ... I change my verbal behavior (e.g. accent tone) when a cross-cultural interaction requires it.   1 2 3 4 5 6 7

17. ... I use pause and silence to suit different cross-cultural situations.   1 2 3 4 5 6 7

18. ... I vary the rate of my speaking when a cross-cultural situation requires it.   1 2 3 4 5 6 7

19. ... I change my non-verbal behavior when a cross-cultural situation requires it.   1 2 3 4 5 6 7

20. ... I alter my facial expressions when a cross-cultural interaction requires it.   1 2 3 4 5 6 7

Appendix 10: Four Factor CQS Observer Report

Cultural Intelligence Scale (CQS) – observer Report

Read each statement and select the responses that best describes this person's capabilities. Select the answer that Best describes this person as he/she REALLY IS (**1**= Strongly Disagree; **7** = Strongly Agree)

1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 7
Strongly   **Strongly**
Disagree   **Agree**

1. This Person is conscious of the cultural Knowledge he/she uses when interacting with people with different cultural backgrounds	1	2	3	4	5	6	7
2. This person adjusts his/her cultural knowledge as he/she interacts with people from a culture that is unfamiliar.	1	2	3	4	5	6	7
3. This person is conscious of the cultural knowledge he/she applies to cross-cultural interactions.	1	2	3	4	5	6	7
4. This person checks the accuracy of his/her cultural knowledge as he/she interacts with people from different cultures.	1	2	3	4	5	6	7
5. This person knows the legal and economic systems of other cultures.	1	2	3	4	5	6	7
6. This person knows the rules (eg. Vocabulary, grammar) of other languages.	1	2	3	4	5	6	7
7. This person knows the cultural values and religious beliefs of other cultures.	1	2	3	4	5	6	7
8. This person know the marriage systems of other cultures.	1	2	3	4	5	6	7
9. This person knows the arts and crafts of other cultures.	1	2	3	4	5	6	7
10. This person knows the rules for expressing nonverbal behaviours in other cultures.	1	2	3	4	5	6	7
11. This person enjoys interacting with people from different cultures.	1	2	3	4	5	6	7
12. This person is confident that he/she can socialize with locals in a culture that is unfamiliar.	1	2	3	4	5	6	7
13. This person is sure he/she can deal with the stresses of adjusting to a culture that is new.	1	2	3	4	5	6	7
14. This person enjoys living in cultures that are unfamiliar.	1	2	3	4	5	6	7
15. This person is confident that he/she can get accustomed to the shopping conditions in a different culture.	1	2	3	4	5	6	7
16. This person changes his/her verbal behaviour (ascent, tone) when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
17. This person uses pause and silence differently to suit different cross-cultural situations.	1	2	3	4	5	6	7
18. This person varies the rate o his/her speaking when cross-cultural situation require sit.	1	2	3	4	5	6	7
19. This person changes his/her nonverbal behaviour when a cross-cultural situation requires it.	1	2	3	4	5	6	7
20. This person alters his/her facial expression when a cross-cultural interaction requires it.	1	2	3	4	5	6	7

Note: This Questionnaires, apart from the CENQ (personally developed for the purpose of this research) the TEIQue/360 Short Form and CQS/CQS observer report are free online or for small amount of money for academic research purpose only and not for commercial use according to copyrights laws by their respective authors. Commercial Use without appropriate approval from the authors is deemed a criminal offence.