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# WHAT ARE THE DEMOGRAPHIC FACTORS THAT INFLUENCE THE DEVELOPMENT OF CULTURAL INTELLIGENCE AMONG PEOPLE WITH SOME TYPE OF INTERNATIONAL EXPERIENCE

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**Abstract**

This research investigates the demographic determinants of Cultural Intelligence (CQ) among individuals with international experience. Utilizing survey questionnaires, the study engages a sample size of N=191. This study utilizes a correlation analysis and a t-test to investigate the relationships with CQ and its four factors. Contrary to expectations, most demographic factors, including education level, did not significantly predict CQ. Notably, the type of international experience emerged as a key determinant, underscoring its importance in developing CQ. These findings challenge existing assumptions, suggesting a need for a broader perspective on CQ's influencers.

**Keywords**: Cultural Intelligence, Demographic Factors, Intercultural Competence, Global Management, Soft Skills, CQ

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## 1. Introduction

In an increasingly interconnected global landscape, the proficiency to adeptly traverse various cultural contexts emerge as not only more valuable but also indispensable (Earley & Mosakowski 2004). In this context, Cultural Intelligence (CQ), includes not only the awareness of diverse cultures, but also encompasses the aptitude to adapt, assimilate, and effectively function within a multitude of cultural environments (Ang et al 2010, 132). Enhanced CQ leads to better intercultural communication, more effective implementation of international strategies, and nurtures a diverse, flexible corporate culture. (Ang et al 2010, 133). This work seeks to provide a more comprehensive understanding. By exploring the correlation between demographic variables and CQ, the research aims to illuminate the nuances of CQ development and its key drivers.

The paper will be structured as follows. Section two is the literature review and look at how demographic factors influence CQ in previous studies, as well as getting an understanding of the dimensions of CQ. The third part will introduce the research and the methodology used in the research. The fourth section is the testing and results of the hypothesis, and the fifth part is the discussion of the results, and a review of limitations and suggestions for further research.

## 2. Literature review

### 2.1 Intercultural intelligence (CQ)

The construct of CQ was introduced by Earley in 2002 and further elaborated by Earley and Ang in 2003 to explain the variances in the effectiveness of individual interactions across cultures (Earley and Ang 2003, 59) It refers to a person's capability to function effectively across different cultures (Ang et al 2010, 132) Empowering individuals with the ability to interact effectively in various cultural settings, enabling them to adapt their behavior and understanding to diverse cultural circumstances. Essentially, it equips individuals with the

capacity to navigate and engage appropriately across a wide spectrum of cultures, facilitating their adeptness in adapting to novel cultural environments. Moreover, it involves the deployment of a set of behaviors that leverage skills and qualities to align with the culture-based values and attitudes of individuals in one's interaction milieu (Ang et al 2010, 133). CQ is in many ways similar to Emotional intelligence (EQ) and general mental ability (GME) Because they are set of abilities instead of ways of behavior. (Mayer et al 1999) Even though you can argue that the behavioral factor if CQ is only based on behavior and not abilities. What sets CQ apart from conventional intelligence scales like IQ and EQ is its distinctive focus on specific contexts and interactions characterized by cultural diversity. CQ also incorporates an understanding of the cultural, sociological, and individual dynamics that manifest in different cultural settings (Ang et al 2010).

**2.2 Different types of intelligence (four factor model)**

Earley and Ang (2003) initially proposed a foundational framework for Cultural Intelligence (CQ) composed of three primary elements: cognitive, motivational, and behavioral CQ. This model has since expanded to include a fourth dimension—Metacognitive CQ—and has been further refined to identify specific subfactors within each dimension (Sternberg et al 2021). Metacognitive CQ encompasses planning, awareness, and checking. Cognitive CQ involves culture-general knowledge and context-specific knowledge, while Motivational CQ comprises intrinsic interest, extrinsic interest, and self-efficacy for adaptation. Behavioral CQ includes verbal behavior, nonverbal behavior, and speech acts (Sternberg et al 2021). These subfactors, as identified by Sternberg et al. (2021), enrich our understanding of the diverse components of Cultural Intelligence (CQ) and assist in categorizing various behaviors more effectively. This four-factor model, provides a structured and nuanced framework for understanding the

multifaceted nature of cultural intelligence, facilitating its measurement and development. (Dyne et al 2010, 134)

*2.2.1. The factors of Cultural intelligence*

**Metacognitive:** Meta-cognition is defined as an individual's knowledge or control over cognitions that leads to deep information processing (Dyne et al 2010, 136). This involves the ability to process information and knowing how to process it, considering the individual's motives, goals, emotions, and external stimuli. "It is not sufficient to simply know oneself to obtain high CQ; individuals must be able to be flexible in their self-concept and have the ability to integrate new components into their self-concept" (Earley and Ang 2003). The metacognitive factor also encourages people to engage in active thinking in various cultural situations. (Dyne et al 2010, 137) For example, an individual with high metacognitive CQ not only actively seeks cross-cultural experiences but also plans deliberate strategies to enhance their intercultural effectiveness. They may proactively research and prepare for interactions, ensuring they adapt their approach based on the specific cultural context. This strategic approach allows them to navigate diverse settings with confidence and cultural sensitivity (Dyne et al 2010, 137).

**Cognitive:** Cognition refers to using knowledge of self, the social environment, and information processing, of cross-cultural issues and differences, as well as cultural universals (Dyne et al 2010, 135). In CQ, it involves general knowledge of the structures of a culture, its norms, practices, and conventions. One of the most important aspects of cognitive CQ is the understanding of cultural systems and its norms. For example, different cultures have different economic approaches, family life, marriage culture, religious beliefs, and social norms. (Dyne et al 2010, 135) To have high cognitive CQ, a person needs to be able to adapt to all these differences. For instance, a person with a strong cognitive aspect of CQ possesses a deep understanding of various cultural norms, values, and customs. They may be well-versed in the

history, traditions, and social practices of different cultures, allowing them to navigate intercultural situations more effectively (Dyne et al 2010, 135).

**Motivational:** The motivational aspect of CQ involves a person's interest in learning and functioning in cross-cultural situations, as well as the individual's capability to direct attention towards cultural differences (Dyne et al 2010, 135). It has been shown that the willingness to gain cross-cultural capabilities varies (Dyne et al 2008, 17). An example for the metacognitive factor can be: An individual with high motivation CQ actively seeks out cross-cultural interactions and challenges. They are genuinely interested in understanding and appreciating different cultures, showing enthusiasm for learning about diverse perspectives (Dyne et al 2010, 135).

**Behavioral:** The behavioral section refers to verbal and nonverbal actions when an individual is interacting with people from different cultural backgrounds, such as changing one's language or non-verbal actions in different cross-cultural situations (Ang et al 2010, 137). Also, it involves knowing how to adjust behavior in different situations within the same culture. For example, business language in China can be significantly different from unformal language in China. One can argue that it's the most visible characteristic in social interactions. Someone with strong behavioral CQ does not only demonstrate genuine interest and knowledge about different cultures but also consistently incorporates inclusive behaviors. They may actively listen, use culturally appropriate body language, and adapt their communication style to foster positive connections. This behavioral flexibility contributes to successful intercultural collaborations and effective relationship-building (Dyne et al 2010, 138).

### 2.3 Developing cultural intelligence:

It is assumed that there is a relationship between cultural exposure and cultural intelligence, and one can become familiar with different cultures in different ways. Such as traveling, studying, reading, or viewing television programs, or by talking to people from different cultures (Crowne 2008).

## 2.4 Demographic variables and Cultural intelligence

The word 'demographic' is frequently used as a substitute for 'demography,' which is the discipline that examines the dynamics of human populations, covering aspects like population expansion and societal transformations (Xie, 2000) This section examines how existing literature explores the link between demographic variables and Cultural Intelligence. It delves into research studies that have investigated the impact of various demographic factors on the development and expression of CQ.

### *2.4.1 Time spent abroad.*

There is expected that time spent abroad is correlating positively with CQ. Prior international experience in foreign countries is likely to have a positive correlation with CQ, and the individuals' attitudes to other cultures. The environment in foreign courtiers is likely to be different than in a person's country of origin. As a result of this people who spend more time abroad is likely to develop their cultural intelligence in the behavior and cognitive factors. (Remhof et al 2013, 230) Tarique and Takeuchi (2008) examined the relationship between international nonwork experiences, with the 4 factors of cultural intelligence. It was found that there was a relationship between the experiences and the four factors. This is consistent with the principles of social cognitive theory, that says that previous international experiences influence one's perceptions of foreign coworkers and behaviors within their personal environment (Remhof et al 2013, 231). Because of this, I hypothesize that:

***H1: The time spend abroad will positively correlate with higher levels of cultural intelligence.***

*2.4.2 Level of education*

Diversity learning and internationalization have become top priorities in the higher education curriculum, and courses that focus on global education is common in higher education. (Lopes-Murphey 2014) Universities also often highlight their study abroad programs. Giving students the opportunity to study abroad or get to know exchange students at their current institution. (Lopes-Murphey 2014) In research done in 2023 results showed that the motivational and behavioral dimensions revealed higher results than the other dimensions, when looking at CQ in an educational aspect. (Sousa, et.al 2023) Additional research has demonstrated a correlation between Cultural Intelligence (CQ) and the academic progression of students, specifically linking CQ levels to the semester they are in during their undergraduate studies. Where people who were further in their degree, showed higher levels of CQ. (Robledo-Ardila et al, 2016). It has also been found that those with higher education score higher on Behavioral CQ. This researcher assumed that it could be more education can provide more opportunities to interact with individuals from different cultures. Therefore, these individuals may be aware of how necessary it is to modify their behavior during cross cultural interactions. (Crowne, 2008) Based on these studies, there is reason to believe that people with higher education will have higher levels of CQ. Because of this, I hypothesize that:

**H2: Education level will positively correlate with higher levels of cultural intelligence.**

*2.4.3 Age*

There seems to be a link between cognition and age, and that two important factors in a person's cognition are age and culture (Na et al 2017). Also, seeing that higher age could be

correlated with decreased cognitive performance, working memory, and more (Na et al 2017). Age, often indicative of an individual's breadth of experiences, can provide insights into the extent of their prior exposure to various life situations and contexts. (Gebregergis et al 2019). In general, there have been mixed results on the topic and related topics. Recent research by Bal and Kolakan (2022) has revealed that age significantly influences Cultural Intelligence (CQ), with findings indicating that older participants tend to have higher CQ scores. This might be because older people tend to develop wisdom, a complex human trait that comes with improved emotional regulation and emotional intelligence (Puzzo et al. 2023). Because of this, I hypothesize that:

**H3: People with higher age will show higher CQ**

2.4.4 Language skills

Language skills can be referred to as an individual's ability to speak easily and accurately in the language that the cross-cultural interactions require. Such as understanding the legal, economic, and social systems of the cultures. (Ang & Dyne 2008) The underlying idea is that speaking a foreign language may help people establish stronger ties and understanding with individuals from that language's cultural background. In the model of Cultural Intelligence (CQ) proposed by Ang and Dyne in 2008, proficiency in a foreign language was not identified as a forerunner to CQ. However it can be seen as mentioned in the four factor model, and in the sub factors. Especially the behavioral CQ factor, as this explains the communication aspects of CQ (Sternberg et al 2021).

Shannon and Begley's (2008) research also indicated that the ability to speak a language other than one's mother tongue could foresee cognitive aspects of CQ. It is suggested that individuals who do not acquire adequate language knowledge may experience lower development in their Cultural Intelligence (CQ). Other research on multinational corporations

also indicates that limited language skills can create a sense of remoteness and disconnect, which can exclude individuals from other people's view (Huff 2013). Shannon and Begley (2008, 43) highlight that individuals less fluent in a workplace's dominant language may face challenges in effectively expressing their opinions within a group. Language skills are also seen as an instrument to understand the dynamics of different cultures and is needed to interact successfully with people from other cultures (Remhof et al 2013). Language skills are assumed to be positively related to the fourth facet of CQ based on the discussed literature, Therefore, we hypothesize:

**H 4:The number of languages a person is proficient in is positively associated with Overall CQ**

**H 4a: The number of languages a person is proficient in is positively associated with motivational CQ**

**H 4b: The number of languages a person is proficient in is positively associated with metacognitive CQ**

**H 4c: The number of languages a person is proficient in is positively associated with cognitive CQ.**

**H 4d: The number of languages a person is proficient in is positively associated with behavioral CQ.**

2.4.5 Type of experience

Commonly, it is posited that international experience gives a beneficial effect on an individual's overall Cultural Intelligence (CQ) (Crowne 2008). This research indicates that individuals with educational and professional experiences abroad exhibit higher CQ levels. In contrast, brief international visits, such as vacations, do not appear to influence CQ significantly (Crowne 2008) Notably, educational experiences abroad have demonstrated a

marked enhancement across all CQ dimensions, whereas employment abroad has been associated with increases in total CQ, Metacognitive CQ, and Behavioral CQ (Crowne 2008). Complementary findings from a study involving Canadian and European students corroborate these observations, revealing that students who have studied or worked internationally showed gains in their overall CQ, with the most pronounced growth occurring within Motivational CQ. Nonetheless, enhancements were recorded across all CQ dimensions (McRae et al 2016, p. 383) Further research has delineated that international experiences linked to work aboard improve job related knowledge and skills, while those unrelated to work such as volunteering, vacationing, and studying abroad improve general cultural knowledge (Ott & Iskhakova, 2019)

**H 5a: People that have studied abroad have higher levels of metacognitive CQ**

**H 5b: People that have worked abroad have higher levels of cognitive CQ**

**H 5c: People that have volunteered abroad have higher levels of metacognitive CQ**

In concluding the review of literature, we can affirm that cultural intelligence (CQ) influenced by an array of demographic factors. The literature delineates CQ into four principal areas: metacognitive, cognitive, motivational, and behavioral, each contributing to an individual's capability to function effectively in cross-cultural contexts.

## 3.0 Research and methodology

### 3.1 Research design

This part describes the methods used to test the hypothesizes. A web-based survey was used for data collection. The data was collected by four NOVA SBE master students in the same umbrella field lab. The data was analyzed using the software SPSS.

### 3.2 Sampling procedure

Data was collected over a period of two weeks, via an online survey in google. The participation of the survey was made on a voluntary basis, and respondents was reached via social media, direct messages, and email. Each student reached out to their own network, as well as to unknown people in Facebook groups for expats. Respondents were asked to evaluate themselves based on different statements. They were also asked to provide demographic data. To be eligible to participate in the survey, the respondent had to have international experience.

### 3.3 Measures and scaling

To assess the validity of the study's model, we gathered data pertaining to various aspects. Specifically, we collected data on the dependent variable, CQ, including its four dimensions. The Cultural intelligence scale was developed by Linn Van Dyne, Soon Ang, and Christine Koh (2008). CQS is the most used scale for measuring Cultural intelligence (Dyne et al 2008). This is a 20-item test, due to these factors giving the strongest psychometric properties. Measuring CQ is done by four distinct capabilities, these are motivation, cognition, meta-cognition, and behavior (Dyne et al 2008). Additionally, we obtained data on the independent variables, which encompassed openness to work experience, age, language proficiency, and international experience. Data were collected from individual participants and then aggregated using well-established scales that have been suggested in the academic literature. The data was measured on a 7 point Likert-type scale, with 1 representing “strongly disagree” and 7 representing “strongly agree”. Due to there being multiple students using the same questionnaire, not every part of the questionnaire is relevant for the research question being discussed in this project. The focus for this paper will be on the demographic data and the CQS scale.

### 3.3.1 Validity and reliability of questionnaire and scales

Validity pertains to the extent to which a measuring instrument accurately assesses the intended behavior or quality it is designed to gauge. It serves as a gauge of how effectively the measuring instrument fulfills its intended function. (Maslakci & Sürücü, 2020) To ensure the validity we asked all of the respondents about their international experience. To make sure we only used the data from people in the target group for the survey.

While reliability serves as an indicator of the consistency and constancy of the measured values when multiple measurements are conducted under identical conditions and with the same measuring instrument. (Maslakci & Sürücü, 2020) To make sure the questionnaire is as reliable as possible recognized scales have been used, and Cronbach's Alpha was assessed. The reliability analysis was performed using the Cronbach's alpha coefficient, a widely recognized measure of scale reliability (Collins, 2007) The metacognitive subscale, composed of four items, demonstrated a Cronbach's alpha of 0.866, indicating a high level of internal consistency among the items. Similarly, the Cognitive subscale, comprising six items, revealed a Cronbach's alpha of 0.863, which also signifies a high degree of internal reliability. The Motivational subscale, with five items, yielded a Cronbach's alpha of 0.870, while the Behavioral subscale, also with five items, presented a Cronbach's alpha of 0.882. These values suggest that each of the subscales possesses a strong internal coherence, with items consistently reflecting their respective constructs.

Additionally, the Overall CQS, encompassing four items likely representing a composite of the dimensions of cultural intelligence, showed a Cronbach's alpha of 0.813. This value, although slightly lower than those of the individual subscales, still indicates a good level of internal consistency for the overall scale.

### 3.4 Analysis

The main statistical method used to test the model and hypotheses in this thesis are correlation analysis, and is used for hypothesis 1, 2, 3 and 4. A correlation is a way to measure the linear relation between two variables. Seeing if there is a positive relationship between the two (Nicol & Pexman 1999 p 53). Because the sample was not normally distributed (*see 4.0.2*) a Spearman correlation was used in the initial hypothesis tests. The Spearman's rank correlation coefficient is a method of testing the strength and positive or negative direction of the correlation between two variables. The test is often used when the data is not normally distributed (Amis, 2017) A Spearman test is also less outliers than for example a Pearson Correlation because its based on ranks (Weir 2011).

To test hypothesis 5 a T- test is used. A T-test is used to determine if two samples differ from each other significantly (Nicol & Pexman 1999 p. 145) An independent sample t-test tells the researcher whether there is a statistically significant difference in the mean scores for the two groups or not (Gerald 2018)

## 4. Results

In this part of the paper, the findings are reported. The data was first exported from Google forms, to excel. Where the data was cleansed and ready to be analyzed in SPSS.

4.0.1 Descriptive Statistics

Upon data cleansing, the analysis proceeded with 192 participants spanning ages 20 to 72, with a dominant presence of students under 30. These individuals hailed from 17 different nationalities, primarily European, though inclusive of a global representation with individuals from China to the USA. All participants had international exposure, varying from brief two-week encounters to extensive 20-year engagements. Predominantly, this international experience was through study abroad programs, reported by approximately 77% of respondents. Work abroad was the second most reported experience type at 42%, noting some

individuals had multiple international exposures. Language proficiency data indicated a majority were multilingual. In gender distribution, females represented 58.5%, while males accounted for 41.5%. Educational backgrounds were diverse: 35.2% held master's degrees, 45.6% had bachelor's degrees, 6.7% held PhDs, 4.7% had completed vocational training, and 6.2% had finished high school.

*4.0.2 Test for normality*

To test for normality in the CQ scale the Kolmogorov-Smirnov and the Shapiro-Wilk tests were used. For both tests, a significance level (*p-value*) less than 0.05 typically indicates that the data do not follow a normal distribution. The Shaprio wilk test examines how close the sample data fit to a normal distribution. It is also most used on smaller samples. (King & Eckersley 2019) The significance was shown at <.001 for overall CQ, behavioral CQ, motivational CQ and metacognitive CQ, and at .032 for cognitive CQ. Since the significance levels are below 0.05, we can conclude that the overall CQ, and the four components of CQ is not normally distributed. These findings necessitate the use of non-parametric methods like Spearman's rho for subsequent correlation analyses, as they are appropriate for non-normally distributed data.

**4.1 Hypothesis**

***H 1: The time spend abroad will positively correlate with higher levels of cultural intelligence.***

Spearman´s rank-order correlation was conducted to examine the relationship between the time spent abroad in years and overall Cultural Intelligence (CQ). Due to the sample of CQ not being normally distributed. The analysis indicated a weak, positive correlation between the two variables, which was not statistically significant (r (189) =.088, $p$ =.225). With an alpha level of 0.05. This means that the correlation observed could easily be due to chance,

and there is not enough evidence to conclude that there is a true relationship in the population between time spent abroad and CQ.

**H2 Education level will positively correlate with higher levels of cultural intelligence.**

To validate this hypothesis there was also performed a Spearman´s rho. The results indicated a negligible correlation between education level and overall CQ, which was not statistically significant (r (189) =.012, $p$ =.871). This statement directly reports the correlation coefficient and the p-value, indicating that the level of education does not have a significant correlation with the overall Cultural Intelligence score among the participants in this sample, with an alpha of 0.05.

**H3: People with higher age will show higher levels of CQ**

To test H3 another Spearman's rank-order correlation was conducted to investigate the association between age and overall Cultural Intelligence (CQ). The results indicated a weak, positive correlation between the two variables, which was not statistically significant. (r (189) =.106, $p$ =.144). We fail to reject the null hypothesis and must conclude that the data does not provide sufficient evidence to support the hypothesis that a higher age is associated with higher levels of cultural intelligence within the population sampled. While a slight positive trend was noted, the lack of statistical significance indicates that age, is not a reliable predictor of cultural intelligence levels in the context of this study.

**H 4:The number of languages a person is proficient in is positively associated with Overall CQ**

**H 4a: The number of languages a person is proficient in is positively associated with motivational CQ**

**H 4b: The number of languages a person is proficient in is positively associated with metacognitive CQ**

**H 4c: The number of languages a person is proficient in is positively associated with cognitive CQ.**

**H 4d: The number of languages a person is proficient in is positively associated with behavioral CQ.**

It was expected to find a positive association with higher levels of cultural intelligence, encompassing its motivational, metacognitive, cognitive, and behavioral dimensions, as well as overall cultural intelligence. To test this hypothesis a Spearman's rho nonparametric correlation analysis was used again to evaluate the strength and significance of the relationships between the number of languages someone is proficient in and the various components of CQ as well as the overall CQ. This nonparametric approach was deemed appropriate due to the non-normal distribution of the cultural intelligence data, as established by previous tests of normality.

The correlation between the number of languages known and metacognitive CQ was found to be insignificantly positive ($r(189) = .047$, $p = .521$), suggesting no substantial link between these variables within the sampled population. Similarly, the correlation with cognitive CQ was weak and non-significant ($r(189) = .086$, $p = .235$), indicating that the cognitive aspect of cultural intelligence does not have a strong relationship with linguistic proficiency in this particular dataset. The analysis revealed a negligible and non-significant negative correlation with motivational CQ ($r(189) = -.026$, $p = .716$), contrary to the hypothesis that greater language proficiency would enhance the motivational dimension of cultural intelligence. Regarding behavioral CQ, the correlation coefficient was close to zero ($r(189) = .016$, $p = .824$), further suggesting no meaningful association with multilingual abilities. Finally, the

overall cultural intelligence score showed a very weak positive correlation with the number of languages known (r (189) = .052, $p$ = .473), which did not reach statistical significance. These findings collectively do not support the hypothesized positive relationship between languages spoken and cultural intelligence. The correlation coefficients for each aspect of cultural intelligence and the overall score were to weak and not statistically significant. This lack of significant findings implies that, the number of languages spoken does not appear to be a determining factor in the cultural intelligence of individuals.

**H 5a: People that have studied abroad have higher levels of metacognitive CQ**

**H 5b: People that have worked abroad have higher levels of cognitive CQ**

**H 5c: People that have volunteered abroad have higher levels of metacognitive CQ**

An independent-samples t-test was conducted to examine whether the experience of studying abroad is associated with higher levels of metacognitive Cultural Intelligence (CQ). The analysis revealed that individuals who had studied abroad (M = 5.6926, SD = 0.97420) scored higher on metacognitive CQ than those who had not (M = 5.2898, SD = 1.20915). This increase was statistically significant, (t (190) = -2.273, unilateral $p < .05$), supporting the hypothesis that studying abroad has a positive effect on metacognitive CQ.

For people that have worked abroad the same test was done. Participants who worked abroad reported (M= 4.7510, SD = 1.09770), while those who did not work abroad reported a (M= 4.4655, SD = 1.02317). The analysis revealed a significant difference between the two groups, (t (172.954) = -1.777, unliteral $p < .05$). Supporting the hypothesis that work experience abroad can positively affect an individual's cognitive CQ.

Looking at people that have worked abroad the average metacognitive CQ scores of individuals with volunteering experience abroad (M = 5.9032, SD = .86284) to those without such experience (M = 5.5419, SD = 1.06699). The test indicated a statistically significant

difference, (t (49,463) = -2.049, unliteral $p$ <.05), supporting the hypothesis that individuals who have volunteered abroad possess higher levels of metacognitive CQ than those who have not.

## 4.2 Further analysis

### *4.2.1 Further analysis on time spent abroad and CQ*

To further investigate if time spent abroad had an impact on CQ this an age split was done, dividing the sample millennials and gen z in one group, and boomers and gen x in the other group. To see if age could interfere with the results. Another spearman's rank was done, the results indicated a moderate positive correlation between the total length of time spent abroad and Overall CQ in the youngest age group (r (158) =.567*,* $p$=.024), which was statistically significant, with an alpha level of 0.05. For the older age group, the results indicated a moderate positive correlation between the time spent abroad and overall CQ (r (29) =.193*,* $p$ =.298), but this was not statistically significant with the same alpha level. This finding supports part of the hypothesis, suggesting that as the length of international experience increases, so does the level of cultural intelligence for millennials and gen z.

### *4.2.2 Further analysis for education level and CQ*

For the correlation between CQ and education level, only marginal correlation was found. Since previous research only found a statistical significance in the motivational and behavioral dimensions. Additional spearman's correlation analysis was done on these dimensions. Here it was found that the correlation between education level and behavioral CQ was (r (189) = -0.012, $p$ = 0.869) and not statistically significant. Similarly, the correlation between education level and motivational CQ was (r (189) = -0.030, $p$ = 0.697) and not significant. These findings suggest that the level of education attained by the participants does

not have a correlate with higher levels of CQ in association with the behavioral or motivational components, and further demonstrates that H3 is not supported.

## 5. Discussion and Concluding recommendation

We aim to find the answer to "*What are the demographic factors that influence the development of cultural intelligence among people with some type of international experience?*"

In the following section, the hypotheses and their results will be discussed and contributions to the theoretical and empirical analysis are presented if relevant.

### 5.1 Main findings

The main purpose of this thesis is to investigate if demographic factors correlate with cultural intelligence. The overall results show weak correlations between most demographic factors tested, and cultural intelligence. Hypothesis 5 was supported. Therefore, it cannot be concluded that any of the demographic factors tested has any influence on one's cultural intelligence.

***Table 1: summary of tested hypothesis***

| | Hypothesis | Testing |
|---|---|---|
| H1 | The time spend abroad will positively correlate with higher levels of cultural intelligence. | H1 is not supported |
| H2 | Education level will positively correlate with higher levels of cultural intelligence. | H2 is not supported |
| H3 | People with higher age will show higher levels of CQ | H3 is not supported |
| H4 | The number of languages a person is proficient in is positively associated with Overall CQ | H4 is not supported |
| H4 a | The number of languages a person is proficient in is positively associated with motivational CQ | H4 a is not supported |
| H4 b | The number of languages a person is proficient in is positively associated with metacognitive CQ | H4 b is not supported |
| H4 c | The number of languages a person is proficient in is positively associated with cognitive CQ. | H4 c is not supported |
| H4 d | The number of languages a person is proficient in is positively associated with behavioral CQ. | H4 d is not supported |
| H5 a | People that have studied abroad have higher levels of metacognitive CQ | **H5 a is supported** |

| | | |
|---|---|---|
| H5 b | People that have worked abroad have higher levels of cognitive CQ | **H5 b is supported** |
| H5 c | People that have volunteered abroad have higher levels of metacognitive CQ | **H5 c is supported** |

### 5.2 Discussion of hypothesis

*H1 Time spent abroad correlates positively with higher levels of cultural intelligence*

Remhold et al (2013) found that people that spend more time abroad is likely to develop their cultural intelligence. Tarique and Takeuchi (2008) also examined the relationship between international experiences. Where they found that there was a relationship between the experiences and the four factors of CQ. The Spearman's rank-order correlation did not provide evidence to support Hypothesis H1, as the relationship between time spent abroad and overall CQ not statistically significant. This suggests that simply spending time abroad is not a sufficient condition for enhancing one's CQ. A factor to why the result in this thesis is not statistically significant, and why the results are not the same as previous research, could be due to the sample not having enough time abroad. There could also be a bias of the measure of self-reporting CQ, where people who have not spent that much time abroad think they know more about other cultures. While those who have experienced learn how little they know of other cultures while experiencing them.

When considering generational cohorts, the data revealed a positive correlation for millennials and Gen Z, suggesting that younger individuals might achieve greater CQ benefits from international exposure, supporting the hypothesis. This could be attributed to the digital native status of these generations, which might predispose them to integrate and learn from diverse cultures more effectively. For older generations, namely Boomers and Gen X, the results were consistent with the overall sample, indicating no significant correlation. A factor to why the two age groups showed different results could also be due to the sample size. There was may

more respondents in the younger age group than in the older group, which could make the sample for the older generations less representable for the population.

*H2 Education level has an impact on cultural intelligence*

The literature underscores the growing emphasis on diversity learning and internationalization within higher education (Lopes-Murphey 2014), suggesting that such educational experiences should enhance CQ. Sousa et al. (2023) highlight that higher achievements in motivational and behavioral CQ are evident in the educational context, and Robledo-Ardila et al. (2016) suggest a progression in CQ with advancing semesters in an undergraduate program. Crowne (2008)

The research done in this work project shows no significant correlation between education level and CQ. There was also no significant correlation found between motivational CQ and behavioral CQ, and education levels. The difference between the anticipated outcomes based on literature and the observed results could be attributed to several factors. One possible explanation might be that the education level in the sample is too similar to one another, and that most of the respondents did have higher education levels. It may also be that education level, as measured in this study, does not capture the aspects of educational experience most relevant to CQ development. Alternatively, it is possible that the influence of education on CQ is nuanced and may be mediated or moderated by other factors not accounted for in the current analysis. These could include the type of educational experiences, the diversity of the educational environment, or the interaction of education with other personal and professional experiences.

*H3 Higher age correlates positively with higher levels of cultural intelligence*

The existing literature suggests a potential connection between cognitive processes and age, highlighting the role of cultural experiences as a key component in cognitive development (Na et al 2017). This is further supported by Gebregergis et al. (2019), who assert that age can be an indicator of accumulated life experiences, which in turn may influence one's CQ. Bal and Kolakan (2022) have also suggested that age serves as a beneficial factor in CQ, positing that older individuals tend to exhibit higher levels of CQ.

However, this study presents a contrasting narrative. The Spearman's rank-order correlation analysis conducted did not reveal a statistically significant relationship between age and overall CQ. This finding contradicts the hypothesis that age positively correlates with higher levels of CQ within the sample. The results indicate that while age may contribute to a range of cognitive and emotional developments, it does not necessarily predict or determine one's level of cultural intelligence.

The lack of significance in the findings could stem from various factors, such as the ages of the samples not being normally distributed. Since most of the respondents were in their twenties. It's also plausible that individual differences, such as personality traits, openness to experience, and even specific life events, could mediate the influence of age on CQ, but this has not been tested in this research.

*H4 The number of languages a person is proficient in is positively associated with Overall CQ*

Prior research has highlighted the importance of language skills in navigating cross-cultural interactions, with some studies suggesting that proficiency in multiple languages might contribute to higher levels of cultural intelligence (CQ), particularly within cognitive and behavioral components (Ang & Dyne 2008; Shannon & Begley 2008).

Contrary to these expectations, the current study found no significant correlation between the number of languages spoken and various dimensions of CQ, including metacognitive, cognitive, motivational, and behavioral aspects. These results were surprising given the theoretical links between language proficiency and CQ, and they suggest a disconnect between the ability to communicate in multiple languages and the skills and attributes measured by CQ. Several factors could account for the non-significance of these results. First, the complexity of CQ may mean that language skills alone are insufficient to capture its breadth. CQ is influenced by a constellation of experiences and cognitive abilities, and language proficiency may be just one of many contributing factors. Second, the nature of the sample and the context of language acquisition could play a role. For instance, if participants learned additional languages in an academic setting without the opportunity to apply them in real-life cultural interactions, this could limit the impact of language skills on CQ. Moreover, the measure of language proficiency used in this study may not have adequately captured the depth and functional use of languages known by the participants. As the only question they were asked was "how many languages are you proficient in?" The level of how proficient they were in multiple languages was not measured.

*H5 The type of experience you have abroad has an impact on CQ*

Previous research has consistently highlighted the importance of international experiences in enhancing an individual's Cultural Intelligence (CQ). Crowne (2008) suggests that long-term educational and professional experiences abroad are more impactful on CQ development than shorter, leisure-based international visits. Educational experiences have been associated with significant improvements across all CQ dimensions, but especially in the metacognitive dimension (Crowne 2008), while employment abroad has shown increases primarily in cognitive CQ (Ott & Iskhakova, 2019).

The results for H5 a, H5 b, and H5 c was proven to be significant. Meaning that there is reason to believe if a person has been studying, working, and volunteering abroad they improve their levels of cultural intelligence. Specifically the cognitive and metacognitive dimensions. These are all types of experiences where you would spend a significant time abroad. There is reason to believe that a person doing any of these activities abroad is likely to interact more with locals, which could be the reason explaining the significance.

### 5.4. Limitations and Directions for Future Research

One significant limitation of this study is the sample, as most of the respondents are around the same age, and there is a lot fewer of the older respondents. Making it less likely that they are representable for the entire population. This demographic concentration introduces a constraint, particularly when investigating the influence of age-related factors.
Furthermore, the data collection process was executed by four students from the same university. Despite their diverse backgrounds, it is a likely that the sample comprises individuals from their personal networks, including friends and family. This effectively transforms the sample into a convenience selection, undermining the confidence in its representativeness for the wider population. There is also likely limitations to the survey that was used. As the survey was rather long, it is unsure whether they read all the questions, or if they responded at random, and answered the survey because they knew us as students.

As a result of the analysis further research could be done with a more diverse sample, to make the results more accurate. Future studies could also examine how much individuals *interact with local* on their travels, to explore if this is a factor that improves CQ. Also looking at a the *specific content of educational programs* to see if certain types of education, such as international studies, language courses, or intercultural communication are more influential in

developing CQ. To capture the evolution of CQ over time, *longitudinal research designs* could provide valuable insights into how CQ develops throughout an individual's education and professional career.

*Qualitative methods*, like interviews and open-ended surveys, could offer a deeper understanding of the personal and subjective experiences that contribute to CQ, particularly insights into how individuals perceive and value their educational experiences in relation to cultural competence. Given the cultural aspect of CQ, comparative studies across different cultural backgrounds could illuminate the ways in which cultural norms and values shape the development of CQ. The impact of technology on CQ could also be interesting, as in the digital age, the role of technology in cultural exchange and learning is growing in importance. Research could explore how virtual interactions and access to digital resources contribute to CQ development.

## 6. Conclusion

This research explored the relationship between various demographic factors and Cultural Intelligence (CQ) in individuals with international experience. The study's comprehensive analysis, based on a diverse sample of 191 participants, primarily focused on examining correlations between CQ and variables such as age, education, time spent abroad, and language proficiency. The results revealed that most demographic factors, contrary to expectations, did not exhibit a statistically significant correlation with CQ. Notably, the type of international experience, particularly studying, working, and volunteering abroad, was found to significantly influence CQ, particularly in the cognitive and metacognitive dimensions. This research invites further exploration into the myriad influences on CQ development, advocating for a broader perspective in the pursuit of enhancing intercultural competence and intelligence.

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