

The Relationship of Cultural Intelligence and Global Citizenship Levels of Preservice Teachers in the Philippines

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Abstract

With the global developments, educational institutions play a vital role in fostering cultural intelligence and global citizenship among individuals, including preservice teachers. Despite the plethora of research on cultural intelligence and global citizenship in higher education abroad, little is known about these in the Philippines, let alone their correlation. In light of the globalizing world, the multicultural context of the Philippine society, and the internationalization of Philippine higher education, this investigation is timely and necessary to inform policymakers and teacher education institutions of the Philippine preservice teachers' preparedness to teach in multicultural and global settings. Employing a quantitative descriptive correlational design, this study investigated the relationship between cultural intelligence and global citizenship levels of 316 Philippine preservice teachers using the Cultural Intelligence and Global Citizenship Scales. The results revealed that while the preservice teachers' overall cultural intelligence, metacognitive, motivational, and behavioral cultural intelligence levels are high, their medium cognitive cultural intelligence level necessitates further development. Regarding global citizenship, they scored satisfactorily on global competence and global civic engagement dimensions, whereas they exhibit limited overall global citizenship attributes, particularly in social responsibility. Most ethnic groups they represented were also identified to have high cultural intelligence and average global citizenship levels. Additionally, the preservice teachers' specialization, year level, and overseas experience did not play significant roles in their cultural intelligence levels. Although the preservice teachers' specialization and overseas did not influence their global citizenship, the study found that their year level significantly affected their global citizenship levels. Overall, a positive correlation between cultural intelligence and global citizenship was identified. Aside from implications for strengthening internationalization strategies, such as increasing study abroad opportunities, enriching academic courses, and organizing more multicultural activities on campus, recommendations for further investigations were discussed.

Keywords: Cultural intelligence, Global citizenship, Philippine preservice teachers

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Introduction

Teachers are the primary agents in preparing students to be culturally intelligent and be global citizens in today's society, which is marked by increasing worldwide connectivity and interaction (Karataş & Arpacı, 2022; Kayışoğlu, 2016; McGaha & Linder, 2014; Sousa et al., 2023; Yüksel & Ereş, 2018). As educators, their role in promoting cultural intelligence and global citizenship is vital as they are responsible for implementing multicultural and global citizenship education by integrating global perspectives in their pedagogical strategies, content, and activities and instilling inclusive values such as respect for diversity and equality among their students. In order to have effective teachers who can cultivate cultural intelligence and global citizenship in students, teacher education institutions should give preservice teachers opportunities to improve their cultural intelligence and global citizenship competence (Karataş & Arpacı, 2022). This can be achieved by incorporating international dimensions in their goals and providing international experiences to their students and staff through pedagogical content, practices, and mobility (Kayışoğlu, 2016; Sousa et al., 2023; Thanosawan & Laws, 2013).

Global and national institutions also recognize the social significance of the two constructs of cultural intelligence and global citizenship. They are contained in the United Nations Sustainable Development Goals for quality education, which aim to ensure that all students gain the knowledge and abilities necessary to advance sustainable development through education for global citizenship and cultural diversity appreciation, among others (United Nations, n.d.). In the Philippines, this commitment was institutionalized through the 2016 implementation of the policy on the internationalization of higher education as specified in the Commission on Higher Education (CHED) Memorandum No. 55 (Commission on Higher Education, 2016). This entails incorporating global aspects into the Philippine higher education institutions' goals and trifocal functions to improve the country's quality of education and develop globally competitive human capital. Indeed, countries like the Philippines that produce teachers who find their way into different parts of the world must take these necessary steps to ensure they are competent to function in cross-cultural contexts and take their citizenship from the local onto the global realm.

Furthermore, while cultural intelligence and global citizenship address different concerns of social experience, both are highly relevant in navigating the globalizing conditions of the society at large. Several literatures claim that cultural intelligence and global citizenship are related. Karataş and Arpacı (2022) and Kaya (2022) argued that cultural intelligence and global citizenship are correlated because both concepts entail having respect and sensitivity to diversity and intercultural skills. Hence, accordingly, individuals with cultural intelligence can effortlessly become global citizens.

With this context, this present study is necessary and timely as it hopes to contribute to the literature on cultural intelligence and global citizenship and the relationship between the two constructs. It also aims to shed light on the Philippine preservice teachers' preparedness to teach in multicultural and international settings and inform future policies on multicultural and global education.

Cultural Intelligence

Cultural intelligence (CQ) was introduced by Earley and Ang (2003) as a new intelligence construct. It is defined as "the capability of an individual to function effectively in situations characterized by cultural diversity" (Ang & Van Dyne, 2008, p. 3) with metacognitive, cognitive, motivational, and behavioral dimensions (Ang et al., 2007; Earley & Ang, 2003; Van Dyne et al., 2008). Metacognitive CQ is the level of conscious cultural awareness a person displays during intercultural exchanges (Ang & Van Dyne, 2008; Yüksel, 2022). Cognitive CQ is the individual's culture-specific and culture-general knowledge in various settings acquired through education and experiences (Fang et al., 2018; Van Dyne et al., 2008; Yüksel, 2022). Motivational CQ shows the individual's effort in learning and adapting to intercultural encounters (Ang et al., 2007). Behavioral CQ reflects an individual's ability to adjust verbal and non-verbal behaviors when interacting with people from various cultural backgrounds (Sousa et al., 2023; Van Dyne et al., 2008; Yüksel, 2022). Individuals with high CQ are better able to engage and adapt to new situations and function effectively in the increasingly globalizing society because they have a broad range of skills to adjust their behaviors when confronted with unexpected ideas and behaviors (Bal, 2022; Ningrum, 2019; Yüksel, 2022).

Previous investigations in higher education settings, most of which employed a quantitative method, exposed the university students' varying CQ levels. For instance, Ang et al.'s (2006) quantitative study revealed that the business undergraduates in Singapore scored the highest in the metacognitive CQ while they obtained the lowest in the cognitive CQ. Moreover, Al-Jarrah (2016) reported that international students in Jordan had a high overall CQ level. Similarly, Mahasneh et al. (2019) also found that university students in Jordan had a high overall CQ level, with metacognitive CQ having the highest value and cognitive CQ having the lowest among the CQ

dimensions. This is supported by the mixed methods study by Barnatt et al. (2020), who revealed that while preservice teachers in the US are cognizant of cultural differences, they are less confident with their knowledge of other cultures. The quantitative study of Silvallana and Suppiah (2022) also demonstrated that public university students in the Philippines had the highest value for the metacognitive dimension while the lowest for the cognitive dimension. A recent confirmation of these results was provided by the quantitative study of Sousa et al. (2023) with engineering students at a Portuguese institution. However, in Senel's (2020) quantitative study in Turkey, the cognitive dimension was found to have higher values than the metacognitive dimension among foreign language students based on the high school where they graduated. Conversely, Bal's (2022) mixed methods research reported a high overall CQ level among language learners in Turkey who had the highest score in motivational CQ while lowest in the cognitive CQ among the CQ dimensions. While the investigations of Bal (2022) and Sousa et al. (2023) discussed above showed a high overall CQ level among their respondents, the quantitative study of Atan (2020) concluded that the preservice teachers in Turkey have an average CQ level.

Several quantitative studies were also conducted on the effects of demographic variables on students' CQ. For example, the quantitative study of Nel et al. (2015) in South Africa concluded that ethnic identity predicts students' metacognitive and cognitive CQ. Similarly, the quantitative investigation of Beneroso and Alosaimi (2020) with engineering students in the United Kingdom found ethnic identity to affect CQ significantly. While the findings on the effects of students' ethnic identity on their CQ are consistent, several investigations revealed contrasting results on the impacts of other variables, such as academic specialization, year level, and overseas experience, on the university students' CQ. To illustrate, Atan (2020) found that the students' academic specialization affected their CQ, as evidenced by the statistically higher CQ of the English Language preservice teachers compared to the Turkish Language preservice teachers. In contrast, Ningrum's (2019) quantitative study in Indonesia reported that specialization did not influence their Social Science and Science students' CQ levels. This result is congruent with the finding of Abo Elazm's (2021) quantitative study with preservice teachers in Egypt. Regarding year level, the quantitative study by Balli (2017) in Turkey reported a substantial variation in the university students' CQ by year level, as the first-year students had considerably lower CQ than those students in the higher levels. In another quantitative study in Turkey, Wujiabudula and Karatepe (2020) concluded that year level is not a determinant of preservice teachers' CQ. Regarding the impact of overseas experience on students' CQ, the study of Gökten and Emil (2019) in Turkey revealed that students who participated in the Erasmus Student Mobility Program had significantly higher CQ levels than those who did not. Likewise, the quasi-experimental study by Alexander et al. (2021) reported that students who participated in study abroad experience in New Zealand, Australia, or Japan had a substantial increase in their overall CQ compared to those who stayed on their campus in the US. Interestingly, in Turkey, Khodadady and Ghahari (2011) reported that students who traveled abroad had a significantly lower CQ than those who did not. In contrast, the quantitative study of Brancu et al. (2016) in Romania concluded that personal travels did not significantly contribute to improving students' CQ due to a lack of interaction during personal travels.

While cultural intelligence studies in the international community are abundant, it is noteworthy that as of the writing of this study, research is scarce on Philippine preservice teachers' CQ, given that the Philippines is a multicultural country and future teachers need to be prepared to work in culturally diverse learning environments (Ruales et al., 2020; Ruales et al., 2021). However, a search on related topics yielded some studies on Philippine preservice teachers' culturally responsive teaching and the impacts of international teaching internships. The descriptive correlational study of Caingcoy et al. (2022) reported that the preservice teachers in Bukidnon, Philippines, generally perceived themselves as competent in culturally responsive teaching and found that gender significantly impacted their culturally responsive teaching competence development, while their specialization did not. Some studies also showed the effectiveness of international teaching internships in enhancing the Philippine preservice teachers' multicultural competence. For example, the qualitative research of Añar et al. (2017) found that the preservice teachers from Bukidnon who participated in an international teaching practicum in Thailand were able to develop their multicultural understanding. Likewise, the qualitative study of Nurazizah et al. (2021) shared that the international teaching practicum experience of two Filipino preservice English teachers who participated in the SEA Teacher project in Indonesia and Thailand fostered the development of their intercultural communicative competence despite experiencing challenges of culture shock and language barriers.

The existing studies on the CQ levels of university students in other countries and the investigations on the impacts of students' demographic characteristics, such as specialization, year level, and overseas experience, on their CQ levels reveal conflicting results. Hence, further investigation is necessary, especially in the Philippines, where studies on cultural intelligence are lacking.

Global Citizenship

Due to global developments, the concept of citizenship has been recently called into question and was given a global attribute (Karataş & Arpacı, 2022; Karatekin & Taban, 2018; Temel, 2016; Thanosawan & Laws, 2013). While there is no consensus on a single definition of global citizenship, it is described as the sense of being identified with a larger and broader culture and community and humankind as a whole (Al-Ani, 2022; Anthony et al., 2014; Karataş & Arpacı, 2022; Kaya, 2022). Reysen and Katzarska-Miller (2013) characterized global citizenship as knowledge, compassion, and acceptance of diverse cultures while advocating social justice, long-term sustainability, and a sense of duty to act. Aside from having prosocial values, global citizens possess the ability to deal with uncertainties and skills in critical thinking, moral reasoning, intercultural communication, cooperation, and conflict resolution (Massaro, 2022; Reysen & Katzarska-Miller, 2013; Yüksel & Eres, 2018).

Morais and Ogden (2011) conceptualized global citizenship as a multifaceted construct with dimensions of social responsibility, global awareness, and global civic engagement. Social responsibility refers to the perception of one's degree of interdependence and care for others, society, and the planet (Morais & Ogden, 2011; Yüksel, 2022; Yüksel & Ereş, 2018). Global competence means having a flexible perspective while proactively striving to learn about others' customs and standards and utilizing this to interact with one another to function effectively in any context (Morais & Ogden, 2011; Yüksel, 2022; Yüksel & Ereş, 2018). Global civic engagement is defined as identifying problems from local, state, and national to global and acting on these issues through volunteering, political activism, and involvement in the community (Morais & Ogden, 2011; Yüksel, 2022; Yüksel & Ereş, 2018).

Like in CQ, several studies have investigated university students' global citizenship levels and reported conflicting results. McGaha and Linder (2014), who utilized the Global-Mindedness Scale, found that the teacher candidates in the US were moderately globally minded. The quantitative study of Temel (2016) also concluded that university students in Turkey who joined a youth leadership meeting had a medium global citizenship level. Similarly, the quantitative study of Karatekin and Taban (2018) found that both Polish and Turkish Erasmus students in several universities in Poland scored the highest in social responsibility and lowest in global civic engagement. On the contrary, Lo et al. (2016) reported that the global competence dimension had the highest value while social responsibility had the lowest value among Hong Kong university students. However, recently, the quantitative investigation of Ulukaya Öteleş (2023) found that Social Studies preservice teachers in Turkey had the highest score in global civic engagement but lowest in the social responsibility dimension. While the investigations of Karatekin and Taban (2018) and Ulukaya Öteleş (2023) reported an average global citizenship level among their respondents, the quantitative study of Abo Elazm (2021), which utilized a self-constructed global citizenship instrument, revealed a high global citizenship level among the preservice teachers in Egypt. The latest quantitative study by Alshawi (2023) also reported that university students in Qatar had a favorable rating of their global citizenship traits.

Similarly, prior investigations on the impacts of students' demographic variables, such as ethnicity, specialization, year level, and overseas experience, on their global citizenship showed inconsistent findings. For instance, the quantitative study of Jacobsen and Linkow (2012) found gaps in civic and political engagement based on race and ethnic identity in the US, with White young adults being the most engaged, followed by Black, while Hispanic young adults being the least engaged. On the contrary, McGaha and Linder (2014) concluded that ethnic identity did not influence the global-mindedness level of preservice teachers in the US. Regarding specialization, Abo Elazm (2021) revealed that preservice teachers' academic specialization did not affect their global citizenship. On the other hand, the quantitative study of Anthony et al. (2014) in the US showed that the global citizenship of university students from different majors significantly varied according to their majors. Concerning year level, Bulut's (2019) quantitative study in Turkey found that preservice teachers' year level had no substantial impact on their global citizenship level despite the increase in global citizenship scores as the year level increases. This finding is refuted by Ulukaya Öteleş (2023), who found that the global citizenship levels of Social Studies preservice teachers in Turkey considerably varied according to their year level. Finally, focusing on the impacts of students' overseas experience on their global citizenship, Karatekin and Taban (2018) concluded that the Turkish students' Erasmus educational experience in Poland significantly affected their global citizenship. In relation, the mixed methods study by Chen (2010) exposed that the Chinese students who studied at a university in the UK perceived their study abroad experience to have developed their critical thinking, global knowledge, cultural awareness, sense of identity, and self-esteem. Similarly, the quantitative study by Wynveen et al. (2012) in the US revealed that university students regarded their study abroad experience to have fostered their awareness and responsibility regarding environmental problems. On the contrary, the quantitative study by Kishino and

Takahashi (2019) with university students in the US found no statistical difference in the global citizenship of those who went abroad to study and those who did not.

Despite numerous studies on global citizenship in higher education abroad and several years of implementation of the internationalization of Philippine higher education to prepare Filipino graduates to be globally competitive, studies conducted on the Philippine preservice teachers' global citizenship seem uncommon. Nevertheless, exploring related topics showed studies on Philippine preservice teachers' 21st-century skills, including the impacts of international teaching practicums and local service-learning on their global competence and civic engagement. Focusing on 21st-century skills, the quantitative study of Mugot and Sumbalan (2019) revealed that only a few of the preservice teachers in Bukidnon, Philippines, use local and global connection strategies in their teaching practice due to a lack of knowledge of international and current trends and issues and difficulty in making global connections. In contrast, Somosot's (2020) quantitative study learned that preservice teachers in Davao del Norte, Philippines, rated their demonstration of global and local connections very high. Moreover, in another qualitative study, Tique (2023) suggested that the professional experiences and challenges encountered by the preservice teachers from Baguio City during their international teaching internships in Thailand will help them hone themselves to become global teachers. Finally, aside from international internship, the qualitative study by Adarlo (2020) concluded that local service learning is also helpful in fostering civic engagement and in teaching students about global citizenship, as exemplified by the involvement of eight Early Childhood Education preservice teachers from Manila in a literacy campaign, which enabled them to foster their civic identity, gain a sense of agency to contribute to society and transform their perspectives.

The same with CQ, available studies conducted abroad on university students' global citizenship and the impacts of students' demographic traits, such as ethnic identity, specialization, year level, and overseas experience, on their global citizenship show different results. These contradicting findings justify the need for more investigations, especially in countries where research on global citizenship is scarce, like the Philippines.

Cultural Intelligence and Global Citizenship

Few studies, all of which employed quantitative method, have investigated the relationship between cultural intelligence and global citizenship. In Egypt, the study of Abo Elazm (2021) concluded that preservice teachers' cultural intelligence and global citizenship levels are positively correlated. Likewise, in Turkey, a positive relationship between the preservice teachers' cultural intelligence and global citizenship levels was reported by Kaya (2022). In another study with preservice teachers in Turkey, Karataş and Arpacı (2022) found that cultural intelligence has a significant direct impact on global citizenship and concluded that cultural intelligence has a mediating role between social responsibility and global citizenship. These findings are further confirmed by the study with in-service teachers in Turkey by Yüksel and Ereş (2018), who also had the same finding, albeit a low positive relationship.

With the increasing relevance of CQ and global citizenship, it is believed that these concepts will be valuable in the Philippines, especially since it is a multicultural country with 110 indigenous ethnolinguistic groups, of which thirty-three percent (33%) are concentrated in Northern Luzon, particularly in the Cordillera Administrative Region (CAR, United Nations Development Program, 2013). Philippine education reflects this diversity, especially in classrooms (Paras, 2020). Given these contexts, the Philippine government continuously upgrades the curriculum to prepare the students to be academically and culturally competitive in local and global actions (Paras, 2020). This is evident in the Department of Education Order 21 series of 2019, which integrates 21st-century skills in the Philippine K to 12 curriculum (Department of Education, 2019). Furthermore, in keeping with the direction of internationalizing tertiary education under CHED Memo No. 55 series of 2016, the standard program outcomes for teacher education programs, as stipulated in the Commission on Higher Education Memorandum Orders 74, 75, 77, and 80 in 2017, require preservice teachers to attain competencies relevant to multicultural teaching and sustainable education (Commission on Higher Education, 2017a; 2017b; 2017c; 2017d). Additionally, based on the DepEd Order No. 42 series of 2017 on the Philippine Professional Standards for Teachers (PPST), professional teachers should have knowledge, understanding, and respect for students' diversity and employ various teaching strategies to nurture their students to be successful citizens of the evolving local and global community (Department of Education, 2017). Moreover, many young Filipino teachers are exploring overseas teaching opportunities nowadays (Arcillo, 2023). Based on the latest available data from the Philippine Overseas Employment Administration (2017), there were 1,328 Filipino teachers deployed in various countries in 2017, which is rising annually (Alicamen & Becamon, 2022).

While research on CQ and global citizenship in higher education has already been developed abroad, little is known about it in the Philippine context. As of the writing of this research paper, it appears that hardly any study has

investigated the correlation between the Philippine preservice teachers' CQ and global citizenship levels, even though it has already been eight years since the internationalization of higher education.

Research Objectives

The present study sought to determine the relationship between preservice teachers' CQ and global citizenship levels. Given this, the study specifically aimed to:

1. measure and compare the overall CQ and global citizenship levels of the preservice teachers;
2. gauge the CQ and global citizenship levels of the preservice teachers according to ethnic identity;
3. determine whether there are any differences in CQ and global citizenship levels based on specialization, year level, and overseas experience; and,
4. identify the relationship between CQ and global citizenship.

Method

Research Design and Materials

A quantitative descriptive correlational study was conducted to identify the relationship between the CQ and global citizenship levels of preservice teachers at a private university in Baguio City, an educational center in the northern Philippines. The Cultural Intelligence Scale (CQS), developed by Ang and colleagues (2007), was utilized to measure the cultural intelligence levels of the preservice teachers. This 20-item instrument is composed of four items for the metacognitive dimension (items 1 to 4), six items for the cognitive dimension (items 5 to 10), and five items each for both motivational (items 11 to 15) and behavioral dimensions (items 16 to 20). The items were rated based on a 7-point Likert scale from strongly disagree (1) to strongly agree (7). Meanwhile, the Global Citizenship Scale (GCS) by Morais and Ogden (2011) was employed to gauge the global citizenship levels of preservice teachers. The GCS has a total of 30 items, with six items for social responsibility (items 1 to 6), nine items for global competence (items 7 to 15), and fifteen items for global civic engagement (items 16 to 30). It has a 5-point Likert scale rating from strongly disagree (1) to strongly agree (5). The authors of the Cultural Intelligence and Global Citizenship Scales granted permission to use both scales for this study.

The survey tool was formatted as a Google Form. The initial section of the Google Form included questions on demographic data such as ethnic identity, specialization, year level, and overseas experience. To clarify one of the variables, ethnic identity, according to Trimble and Dickson (2005), is a concept that entails affiliation by individuals to a specific ethnic group to which they perceive themselves to belong. The succeeding sections contained the 20-item Cultural Intelligence Scale (CQS) and the 30-item Global Citizenship Scale (GCS).

Research Procedure and Ethics

The survey was administered after obtaining clearance from the university's ethics review board and the relevant offices. The ethics committee approval certificate (Date: 04.03.2024- Number: SLU-REC 2024-073) was obtained from Saint Louis University, Baguio City, Philippines. The year-level coordinators were requested to share the Google Form link with their student chat groups. An informed consent form was included in the survey link to ensure that the respondents were provided with necessary information about the nature and purpose of the study. There were no risks to the respondents voluntarily participating in the survey, and data privacy and confidentiality were upheld. The researchers declare no conflict of interest in the study's conduct.

Respondents

The study's respondents were the preservice teachers at a private university in Baguio City, Philippines. Specifically, the study included undergraduate preservice teachers enrolled in the said private university during the second semester of the academic year 2023-2024. However, students taking double majors, such as Certificate in Teaching (CIT), and graduates awaiting the teacher licensure examination were excluded as research respondents. Moreover, the lone representative of BSED Filipino was excluded due to underrepresentation. To gather the data, the study employed a complete enumeration of 364 undergraduate preservice teachers enrolled at the private university during the second semester of the academic year 2023-2024. A total of 316 preservice teachers responded to the online survey.

Table 1 displays the preservice teachers' demographic profile. More of the preservice teachers identified themselves as belonging to the cultural groups in the northern Philippines, which are Ilocano (29.43%), Igorot (18.99%), Tagalog (15.82%), Pangasinan (11.08%), Kankanaey (8.23%), and Ibaloi (5.06%). Also included are international students, with one Russian, one Vietnamese, and three Chinese. Regarding specialization and year level, most respondents specialized in BSED English (58.23%) and were in the third-year level (33.20%). Finally, respondents with overseas experience (19.30%) were outnumbered by those who did not have any (80.70%).

Table 1. Demographic Profile of the Preservice Teacher Respondents (n=316)

Variable	Level	Count	Percentage
Ethnic Identity	Bicolano	3	0.90%
	Bisaya	2	0.60%
	Chinese	3	0.90%
	Ibaloi	16	5.10%
	Igorot	60	19.0%
	Ilocano	93	29.40%
	Kalinga	2	0.60%
	Kankanaey	26	8.20%
	Kapampangan	9	2.80%
	Pangasinan	35	11.10%
	Tagalog	50	15.80%
	Zambal	3	0.90%
	Ethnic identities with one respondent each (Applai, Bag-o, Batangueña, Chinese-English, Chinese-Ilocano, Cordilleran, Half-Igorot/Half-Tagalog, Ibannag, Ifugao, Ilocano-Tagalog, Ilonggo, Moro, Russian, Vietnamese)		14
Specialization	Bachelor of Elementary Education (BEED)	38	12.03%
	Bachelor of Physical Education (BPEd)	9	2.84%
	Bachelor of Secondary Education major in English (BSED English)	184	58.23%
	Bachelor of Secondary Education major in Math (BSED Math)	8	2.53%
	Bachelor of Secondary Education major in Science (BSED Science)	11	3.48%
	Bachelor of Secondary Education major in Social Studies (BSED Social Studies)	45	14.24%
	Bachelor of Special Needs Education (BSNEd)	21	6.65%
Year Level	1 st Year	57	18.00%
	2 nd Year	59	18.70%
	3 rd Year	105	33.20%
	4 th Year	95	30.10%
Overseas Experience	Yes	61	19.30%
	No	255	80.70%

Data Analysis

Statistical analyses were performed using the Jamovi software. The reliability tests conducted on the Cultural Intelligence Scale (CQS) and Global Citizenship Scale (GCS) revealed that both scales were reliable, with reliability coefficient values of 0.901 and 0.888, respectively.

The weighted mean was used to compute the preservice teachers' CQ and global citizenship scores and their CQ and global citizenship scores according to ethnic identity. One-way ANOVA was used to determine the differences in CQ and global citizenship scores according to the respondents' academic specialization and year level. An independent samples T-test was employed to identify the level of differences in CQ and global citizenship scores based on the respondents' overseas experience. Finally, Pearson correlation analysis was done to identify the relationship between the preservice teachers' levels of CQ and global citizenship. The study used the 0.05 level of significance. The data gathered for CQ has a skewness value of -0.258 and a kurtosis value of 0.0732, while the collected data for global citizenship has skewness and kurtosis values of 0.459 and 1.48, respectively. These values indicate that the data collected for CQ and global citizenship are fairly symmetrical and normally distributed.

The following categories (Table 2) used in some studies (e.g., Bal, 2022; Mahasneh et al., 2019; Sousa et al., 2023) were adopted to interpret the preservice teachers' cultural intelligence scores. CQ scores between 1.00-2.99 were interpreted as "low-level CQ," while scores between 3.00-4.99 and 5.00-7.00 have been interpreted as "medium/moderate level CQ" and "high-level CQ," respectively.

Table 2. Cultural Intelligence Score Intervals and Interpretation

Score Intervals	Interpretation
5.00-7.00	High CQ
3.00-4.99	Medium/Moderate CQ
1.00-2.99	Low CQ

Meanwhile, the guide to interpreting the preservice teachers' global citizenship scores (Table 3) was adapted from the study of Karatekin and Taban (2018). Global citizenship scores between 1.00-1.80 were interpreted as Very Inadequate (VI), 1.81-2.60 as Inadequate (I), 2.61-3.40 Average (A), 3.41-4.20 as Satisfactory (S), and 4.21-5.00 as Very Satisfactory (VS).

Table 3. Global Citizenship Score Intervals and Interpretation

Score Intervals	Levels	Interpretation
4.21-5.00	Strongly Agree	Very Satisfactory (VS)
3.41-4.20	Agree	Satisfactory (S)
2.61-3.40	Neutral	Average (A)
1.81-2.60	Disagree	Inadequate (I)
1.00-1.80	Strongly Disagree	Very Inadequate (VI)

Results and Discussion

This section presents the study's findings and corresponding discussions based on the data collected.

Table 4. Preservice Teachers' Overall Cultural Intelligence Level

Dimensions	Overall CQ	
	Mean	Qualitative Interpretation
Metacognitive Dimension	5.90	High
Cognitive Dimension	4.75	Medium
Motivational Dimension	5.52	High
Behavioral Dimension	5.47	High
Overall	5.41	High

Table 4 shows the overall CQ level of preservice teachers. Accordingly, the preservice teachers scored the highest in the metacognitive dimension ($\bar{x}=5.90$), followed by the motivational ($\bar{x}=5.52$) and behavioral dimensions ($\bar{x}=5.47$), respectively, which suggest that they have a high CQ level in these dimensions. Conversely, the cognitive CQ ($\bar{x}=4.75$) is where they scored the lowest, which implies that they have a medium cognitive CQ level. Considering all four CQ domains, their overall CQ score ($\bar{x}=5.41$) indicates a high CQ level.

The preservice teachers' high metacognitive CQ level implies they are very conscious of their cultural knowledge and verify and adjust it when engaging in cross-cultural exchanges. The same finding is true for several studies (e.g., Al-Jarrah, 2016; Ang et al., 2006; Bal, 2022; Barnatt et al., 2020; Mahasneh et al., 2019; Silvallana & Suppiah, 2022; Sousa et al., 2023). Ang et al. (2011) and Yüksel (2022) claimed that individuals with high metacognitive CQ question, reflect and adjust their assumptions and mental models during intercultural exchanges.

Conversely, the preservice teachers' medium cognitive CQ level suggests they are slightly knowledgeable of other cultures' legal, economic, communication, belief and marriage systems, cultural values, and arts and crafts. Some studies (e.g., Ang et al., 2006; Bal, 2022; Barnatt et al., 2020; Beneroso & Alosaimi, 2020; Mahasneh et al., 2019; Silvallana & Suppiah, 2022; Sousa et al., 2023; Wujabudula & Karatepe, 2020) also uncovered that their university student participants obtained the lowest score in the cognitive dimension.

Meanwhile, the preservice teachers' high motivational CQ level implies that they delight in interacting with individuals from different cultural backgrounds, living in unfamiliar cultures, and are highly confident in being successful in cross-cultural situations. Individuals with high cognitive CQ have higher self-efficacy and intrinsic motivation, which makes them more capable of learning and functioning in cross-cultural situations (Ang & Van Dyne, 2008; Ang et al., 2007; Ang et al., 2011; Sousa et al., 2023; Van Dyne et al., 2008; Wujabudula & Karatepe, 2020; Yüksel, 2022)

Moreover, the preservice teachers' high behavioral CQ level indicates they are highly skillful in adapting their verbal and non-verbal behaviors to fit their actions in cross-cultural situations. This finding agrees with other studies (e.g., Bal, 2022; Mahasneh et al., 2019; Sousa et al., 2023; Wujiabudula & Karatepe, 2020). Some literature (e.g., Ang & Van Dyne, 2008; Ang et al., 2007; Ang et al., 2011; Sousa et al., 2023; Yüksel, 2022) claim that people with high behavioral CQ levels are capable of adjusting their verbal and non-verbal behaviors to exhibit appropriate actions in various intercultural settings.

Overall, the results reveal a high CQ level among the preservice teachers involved in this study. This is similar to the results obtained by other studies (e.g., Abo Elazm, 2021; Al-Jarrah, 2016; Bal, 2022; Mahasneh et al., 2019; Sousa et al., 2023; Wujiabudula & Karatepe, 2020) but contrary to Atan (2020) and Yüksel and Eres (2018) who reported an average CQ among their respondents in Turkey. It can be supposed that the gap in the results is due to the difference in the formula and set of interpretations used for CQ. The high CQ level of the preservice teachers in this study means that despite having a moderate knowledge of other cultures, they are highly aware of their cultural knowledge during intercultural exchanges, highly interested and confident in cross-cultural interactions, and exceptionally flexible in intercultural contexts. In the teaching field, this entails that the preservice teachers in this study are ready to teach in multicultural settings because, according to Yüksel (2022), teachers with a high CQ level can adapt their approach to teaching, evaluation and feedback when working with diverse students.

Table 5. Preservice Teachers' Overall Global Citizenship Level

Dimensions	Overall	
	Mean	Interpretation
Social Responsibility Dimension	2.70	Average
Global Competence Dimension	3.50	Satisfactory
Global Civic Engagement Dimension	3.41	Satisfactory
Overall	3.30	Average

Table 5 shows the overall global citizenship level of the preservice teachers. The results reveal that the preservice teachers scored the highest in the global competence dimension ($\bar{x}=3.50$), followed by the global civic engagement dimension ($\bar{x}=3.41$). These imply that the preservice teachers perceive their global competence and global civic engagement satisfactorily. However, they scored the lowest in the social responsibility dimension ($\bar{x}=2.70$), which is an average level. Overall, the results ($\bar{x}=3.30$) indicate an average global citizenship level among the preservice teachers.

The preservice teachers' satisfactory score in the global competence dimension indicates they view themselves as globally competent individuals who recognize their capabilities in helping solve global issues, adapting their behaviors to communicate successfully with others, and being informed of global issues and events. Similarly, Karatekin and Taban's (2018) student participants have a satisfactory notion of their global competence. Confirming this, globally competent individuals are described to be knowledgeable of their strengths and limitations in cross-cultural exchanges, can successfully engage in intercultural exchanges due to their ability to demonstrate a wide array of intercultural communication skills, and are interested and knowledgeable of worldwide issues and events (Morais & Ogden, 2011; Yüksel, 2022; Yüksel & Ereş, 2018).

Moreover, the preservice teachers had a satisfactory score in the global civic engagement dimension, which implies that they partake in volunteer work and local activities that help people and communities in need, support a global cause, and publicly express their views and concerns about global issues through various media platforms. This corresponds with several literatures (e.g., Morais & Ogden, 2011; Yüksel, 2022; Yüksel & Ereş, 2018) who described civically engaged individuals as people who volunteer or help in civic organizations, form their political voice, and participate in purposeful local actions to further global causes.

Meanwhile, the preservice teachers' average social responsibility level suggests that they may not be as concerned and responsible with the problems faced by people in other parts of the world. They somehow recognize that the world is fair but also acknowledge that other people have more opportunities than others. This finding starkly contrasts with Karatekin and Taban's (2018) finding that their participants had a satisfactory level of social responsibility. In comparison, socially responsible individuals are highly capable of assessing social issues, global justice and disparities, demonstrating altruism and empathy to address local and global problems, and understanding the connections between personal and local actions and their worldwide effects (Morais & Ogden, 2011; Yüksel, 2022; Yüksel & Ereş, 2018).

Generally, the preservice teachers in this study perceive themselves to have an average level of global citizenship. This finding differs from other investigations (e.g., Abo Elazm, 2021; Alshawi, 2023), whose respondents reported a positive assessment of their global citizenship traits. It can be said that the discrepancy in the result of the current study and other studies might have been due to the use of different tools to measure global citizenship and interpret the scores.

Despite the contrary results of other investigations, the present study's finding agrees with other studies (e.g., Karatekin & Taban, 2018; Kayışoğlu, 2016; McGaha & Linder, 2014; Temel, 2016; Ulukaya Öteleş, 2023; Yüksel & Ereş, 2018). In general, the preservice teachers' average global citizenship level in this study implies that their global citizenship knowledge, values, and skills may be deficient. This means that they lack the competencies and values of global citizens like global knowledge, dealing with uncertainties, critical thinking, moral reasoning, intercultural communication skills, cooperation and conflict resolution skills, respect and value for diversity, social justice, intergroup empathy and help, care for the environment, and a sense of responsibility for others (Massaro, 2022; Reysen & Katzarska-Miller, 2013; Yüksel & Ereş, 2018).

In the teaching field, teachers' insufficient global citizenship level can negatively impact the quality of global citizenship education (Yüksel & Ereş, 2018). The similarity of results on university students' average global citizenship level should direct higher education institutions, especially teacher education institutions, in improving their global citizenship education initiatives and strategies to enhance the preservice teachers' global citizenship. As such, local service-learning might offer opportunities to foster critical global citizenship among students, as demonstrated in the study by Adarlo (2020).

Table 6. Cultural Intelligence Level by Ethnic Identity

Ethnic Identity	Overall Mean	Qualitative Interpretation
Bicolano	5.58	High
Bisaya	6.08	High
Chinese	5.49	High
Ibaloi	5.25	High
Igorot	5.58	High
Ilocano	5.41	High
Kalinga	5.69	High
Kankanaey	5.39	High
Kapampangan	5.30	High
Pangasinan	5.51	High
Tagalog	5.08	High
Zambal	4.63	Medium
Ethnic identities with one respondent each (Applai, Bag-o, Batangueña, Chinese-English, Chinese-Ilocano, Cordilleran, Half-Igorot/Half-Tagalog, Ibannag, Ifugao, Ilocano-Tagalog, Ilonggo, Moro, Russian, Vietnamese)	5.90	High

Table 6 presents the CQ levels of the various ethnic identities the preservice teachers affiliate themselves with. The results reveal a variation in their CQ levels. It is observable that almost all of the preservice teachers' ethnic affiliations, including the international students, have a high cultural intelligence level except for the ethnic group Zambal, whose mean score is at a medium level.

The finding on the disparity in the CQ levels of the different ethnic identities is congruent with the findings of other studies (e.g., Beneroso & Alosaimi, 2020; Nel et al., 2015). However, despite the differences in the CQ levels, most of the ethnic groups that the preservice teachers identified with were found to have a high CQ level. Moreover, international preservice teachers were also found to have a high CQ level, which matches the CQ level of international students in the study of Al-Jarrah (2016) in Jordan. The high CQ level among numerous ethnic identities in this study suggests that these groups are mindful of their cultural knowledge, are familiar with cultural differences, are interested and confident in engaging in intercultural exchanges, and can adapt their behaviors to

diverse contexts. In today's globalizing world, the increasing interaction among students from different ethnic backgrounds encourages the development of their CQ, helping them to become more tolerant of diversity (Kaya, 2022; Yüksel, 2022). Mahasneh et al. (2019) argued that aside from maturity level, the high CQ level of university students is due to their exposure to a diverse student body. Applied in the context of the present study, the preservice teachers' exposure to a multicultural student body, as evidenced by the diverse ethnic identities, and possibly a positive experience with their cultural exposure in the university might explain the high CQ level among various ethnic groups. However, the lack of literature on the differences in CQ levels of various ethnic groups and their explanations prevents us from understanding the topic further.

Table 7. Global Citizenship Level by Ethnic Identity

Ethnic Identity	Overall Mean	Qualitative Interpretation
Bicolano	3.29	Average
Bisaya	3.18	Average
Chinese	3.01	Average
Ibaloi	3.15	Average
Igorot	3.23	Average
Ilocano	3.34	Average
Kalinga	3.38	Average
Kankanaey	3.25	Average
Kapampangan	3.33	Average
Pangasinan	3.44	Satisfactory
Tagalog	3.22	Average
Zambal	3.10	Average
Ethnic identities with one respondent each (Applai, Bag-o, Batangueña, Chinese-English, Chinese-Ilocano, Cordilleran, Half-Igorot/Half-Tagalog, Ibannag, Ifugao, Ilocano-Tagalog, Ilonggo, Moro, Russian, Vietnamese)	3.49	Satisfactory

Regarding the preservice teachers' global citizenship level according to ethnic identity, Table 7 reveals a disparity in the global citizenship levels of various ethnic identities in the study. While no group obtained a below-average global citizenship level, it is noticeable that Pangasinan and ethnic identities with one respondent each (i.e., Applai, Bag-o, Batangueña, Chinese-English, Chinese-Ilocano, Cordilleran, Half-Igorot/Half-Tagalog, Ibannag, Ifugao, Ilocano-Tagalog, Ilonggo, Moro, Russian, and Vietnamese) obtained a satisfactory global citizenship level, while the rest of the groups obtained an average level.

Parallel to this study's findings on Chinese preservice teachers' average global citizenship level, Karatekin and Taban (2018) also found that Turkish Erasmus students in Poland have an average global citizenship level. The results suggest that several ethnic groups represented in the present study may have limited global citizenship attributes. Although intercultural learning experiences brought about by exposure to a diverse student body do not certainly result in the development of global citizenship attributes, these can be opportunities for students to become socially responsible and culturally competent individuals (Kishino & Takahashi, 2019). Regrettably, the lack of research on the global citizenship levels of various ethnic groups hinders further understanding of the matter.

Table 8. Preservice Teachers' Cultural Intelligence Level by Specialization

Specializations	n	CQ Mean	SD	Qualitative Interpretation	Level of Difference	
					P-value	Qualitative Interpretation
BEED	38	5.36	0.646	High	0.103	Not Significant
BPED	9	5.43	0.863	High		
BSED English	184	5.40	0.633	High		
BSED Math	8	5.56	1.171	High		
BSED Science	11	4.91	0.814	Medium		
BSED Social Studies	45	5.66	0.642	High		
BSNED	21	5.26	0.560	High		

Table 8 indicates the statistical results of the preservice teachers' CQ levels based on specialization. Among the specializations, Social Studies majors rated their CQ the highest ($\bar{x}=5.66$), which can be attributed to their curriculum that includes subjects related to politics, economy, culture, and society. In contrast, Science majors ($\bar{x}=4.91$) scored the lowest in the CQS, the only medium CQ level among the specializations. However, the ANOVA results ($p\text{-value}=0.103$) reveal no statistical difference among the CQ scores of the various specializations, indicating that the preservice teachers' specialization did not considerably affect their CQ scores. The preservice teachers, regardless of their specialization, exhibit the same level of competence to work and succeed in a multicultural environment.

The study's result is similar to other studies (e.g., Abo Elazm, 2021; Ningrum, 2019), who also reported that their participants' specialization did not influence their CQ scores; and the study Caingcoy et al. (2022), who uncovered that the specialization of preservice teachers in Bukidnon did not provide them an edge in culturally responsive teaching. According to the curriculum of the preservice teachers in the present study, the insignificant distinction in CQ among the specializations could have arisen from the standard subjects taken by the preservice teachers, which are geared towards developing their competence in cultural awareness, cultural sensitivity, cultural knowledge, intercultural communication, civic services, and inclusive and multicultural education.

Table 9. Preservice Teachers' Global Citizenship Level by Specialization

Specializations	n	Mean	SD	Qualitative Interpretation	Level of Difference	
					P-value	Qualitative Interpretation
BEED	8	3.24	0.353	Average	0.086	Not Significant
BPED	9	3.29	0.283	Average		
BSED English	184	3.26	0.404	Average		
BSED Math	8	3.57	0.634	Satisfactory		
BSED Science	11	3.17	0.487	Average		
BSED Social Studies	45	3.52	0.533	Satisfactory		
BSNED	21	3.20	0.416	Average		

Based on the results shown in Table 9, a disparity is observed in the global citizenship scores of the preservice teachers according to their specialization. The Math ($\bar{x}=3.57$) and Social Studies majors ($\bar{x}=3.52$) had higher observance (both satisfactory) of their global citizenship competencies, while the Science majors ($\bar{x}=3.17$) scored average. Nonetheless, the variation in the preservice teachers' global citizenship scores of the preservice teachers due to their specializations was nonsignificant ($p\text{-value}=0.086$). This means that the preservice teachers' specialization is not a factor in determining their global citizenship. This might be related to their similar educational experiences with the university's internationalization programs. Because of the internationalization of Philippine higher education, global dimensions were incorporated into their academic subjects, such as general education courses and campus activities, which provide opportunities for all preservice teachers to develop their global citizenship competencies and empowerment for service.

The study's result mirrors that of Abo Elazm's (2021) finding. However, most of the available literature (e.g., Alshawi, 2023; Anthony et al., 2014; McGaha & Linder, 2014) negates the study's findings as they revealed academic specialization to impact the students' global citizenship substantially. It is essential to understand that compared to the present study, which only focused on the teacher education department, the works of Alshawi (2023) and Anthony et al. (2014) involved respondents from different colleges, and this could be the reason for the discrepancy between findings on the influence of specialization on students' global citizenship.

Table 10. Cultural Intelligence Level by Year Level

Year Levels	n	Mean	SD	Qualitative Interpretation	Level of Difference	
					P-value	Qualitative Interpretation
1 st Year	57	5.28	0.537	High	0.133	Not Significant
2 nd Year	59	5.43	0.658	High		
3 rd Year	105	5.37	0.710	High		
4 th Year	95	5.52	0.697	High		

Table 10 indicates the preservice teachers' CQ level by year level. The results show an apparent progression of the preservice teachers' CQ from the first year ($\bar{x}=5.28$) to the fourth year ($\bar{x}=5.52$), although there is a slight dip in the third-year or junior preservice teachers' CQ score ($\bar{x}=5.37$). Subjected to one-way ANOVA, the results (p -value=0.133) show that their CQ insignificantly varies by year level. The findings demonstrate that the preservice teachers' year level did not determine their CQ despite the progression of their CQ.

Several investigations (e.g., Senel, 2020; Wujiabudula & Karatepe, 2020) corroborate the results of this study. Mahasneh et al. (2019) opined that university students represent a level of maturity that is knowledgeable and understanding of other cultures and act appropriately in intercultural situations. Conversely, the results of other investigations (e.g., Atan, 2020; Balli, 2017) differ from the current study's findings, as they found a significant relationship between students' year level and CQ. Atan (2020) exposed that the contents learned at higher class levels contribute to CQ development and claimed that individuals' CQ levels increase as they get older and gain more education and experience. The present study's findings, albeit insignificant, show an apparent contribution of the cultural contents and training gained by the preservice teachers as they advance to the succeeding levels, as evidenced by the improvement of their CQ. However, the insignificant difference between the CQ levels of the preservice teachers, notwithstanding their year level, could be related to the similarity of their exposure to diverse cultures in their environment and through their use of social media.

Table 11. Global Citizenship Level by Year Level

Year Levels	n	Mean	SD	Qualitative Interpretation	Level of Difference	
					P-value	Qualitative Interpretation
1 st Year	57	3.18	0.386	Average	0.017	Significant
2 nd Year	59	3.32	0.436	Average		
3 rd Year	105	3.25	0.415	Average		
4 th Year	95	3.40	0.470	Average		

Meanwhile, Table 11 presents the preservice teachers' global citizenship scores by year level. As the results indicate, there is an upward trend in the preservice teachers' global citizenship scores from the first year ($\bar{x}=3.18$) to the fourth year ($\bar{x}=3.40$), except for a slight drop in the third-year preservice teachers' global citizenship score ($\bar{x}=3.25$). After performing one-way ANOVA, the results (p -value=0.017) imply a significant positive relationship between the preservice teachers' year level and their perception of their global citizenship traits.

This finding agrees with Ulukaya Öteleş (2023), who reported that as the preservice teachers' knowledge and awareness increase as their year level upgrades, their global competence and global civic engagement levels also increase. In the present study, the significant variation in global citizenship among the preservice teachers might be attributed to their curriculum. As they upgrade in year level, their subjects become more in-depth and complex and include more global dimensions, which might have led to more knowledge about the world, a better grasp of the plight of other people, and empowerment to serve. Especially at the higher levels, they are given more opportunities to engage in outside activities to practice their global citizenship.

Contradictory to the study's results, several research (e.g., Bulut, 2019; Kishino & Takahashi, 2019; McGaha & Linder, 2014) established that students' year level is not a predictor of global citizenship. Although statistical analyses found no substantial effect of the students' years in the university on their global citizenship scores, Kishino and Takahashi (2019) found that senior students appreciated their academic courses better than junior students because the former could consolidate their learning experiences in the university. In the present study, it can be suggested that as the preservice teachers advance in year level, they develop a broader perspective and become more mature in understanding and confident in acting on global concerns.

Table 12. Cultural Intelligence Level by Overseas Experience

Cultural Intelligence	Yes (n=61)			No (n=255)			Level of Difference	
	Mean	SD	Q.I.	Mean	SD	Q.I.	P-value	Q.I.
Overall CQ	5.52	0.713	High	5.38	0.659	High	0.151	Not Significant

Table 12 indicates the CQ levels of the preservice teachers by overseas experience. The data shows that preservice teachers with overseas experience ($\bar{x}=5.52$) exhibited a higher CQ than those without overseas travel ($\bar{x}=5.38$). Nevertheless, the T-test result (p -value=0.151) shows that the gap is insignificant, implying that the overseas experience variable did not determine the preservice teachers' CQ. Specifically, the preservice teachers who had

experience going abroad had an insignificant CQ advantage over those without overseas experience. Similarly, Bal (2022) argued that going abroad does not necessarily result in more interest and tolerance in dealing with other cultures. Brancu et al. (2016) also reported that students' personal travels overseas did not significantly improve their CQ due to a lack of cross-cultural interaction.

Sousa et al. (2023) argued that traveling abroad to contact diverse cultures is unnecessary since opportunities arise in the home country that allows interaction with those from different cultural backgrounds. In the present study, the negligible difference in CQ between those who traveled abroad and those who did not might be due to their comparable cultural exposure in the university. With the intensifying globalization and internationalization of Philippine higher education, their cultural exposure in the academe and environment could have a parallel effect on the preservice teacher's CQ, regardless of whether they traveled overseas. Since the preservice teachers are studying in Baguio City, an educational center in the Northern Philippines and a popular tourist destination, intercultural contact is inevitable. Although cultural exposure in the classroom is insufficient for developing CQ, cultural exposure in the place of residence enhances the CQ levels which makes them as culturally competent as those with experience traveling abroad (Sousa et al., 2023).

Contrarily, the findings of several studies (e.g., Balli, 2017; Sousa et al., 2023; Wujiabudula & Karatepe, 2020) reported a significant relationship between overseas experience and CQ levels. University students with overseas experience notably had higher CQ levels than their colleagues without experience abroad. Several studies (e.g., Balli, 2017; Wujiabudula & Karatepe, 2020) recommended providing overseas experience to students. Specifically, participating in exchange programs effectively promotes CQ (Alexander et al., 2021; Gökten & Emil, 2019; Sousa et al., 2023). Filipino preservice teachers who participated in international teaching internships considered the experience helpful in developing their intercultural communication skills and multicultural understanding (Añar et al., 2017; Nurazizah et al., 2021).

While most of the studies revealed a significant impact of student exchange programs on students' CQ levels, it must be underscored that the present study did not specify the type of overseas experience the preservice teachers had. It can be argued that certain types of overseas experience significantly impact the students' CQ, while other types of overseas experience do not.

Table 13. Global Citizenship Level by Overseas Experience

Global Citizenship	Yes (n=61)			No (n=255)			Level of Difference	
	Mean	SD	Q.I.	Mean	SD	Q.I.	P-value	Q.I.
Overall GC	3.35	0.402	Average	3.28	0.444	Average	0.282	Not Significant

Table 13 indicates the preservice teachers' global citizenship levels by overseas experience. As seen in the results, preservice teachers who had traveled overseas ($\bar{x}=3.35$) had a slightly higher perception of their global citizenship than their counterparts ($\bar{x}=3.28$). While a gap is observed in the global citizenship scores between the preservice teachers with overseas experience and those without, the T-test result ($p\text{-value}=0.282$) shows no statistical variation between the two groups. The result implies that overseas experience did not substantially affect the preservice teachers' global citizenship level. This might be due to their parallel educational experience in the university, notwithstanding whether they traveled overseas or not.

This study confirms the findings of others on the nonsignificant influence of overseas experience on global citizenship. Accordingly, joining study abroad programs does not automatically develop global dispositions among individuals and transform learners into global citizens (Kishino & Takahashi, 2019; McGaha & Linder, 2014). Contrary to the study's findings, other research (e.g., Chen, 2010; Karatekin & Taban, 2018; Wynveen et al., 2012) reported a considerable impact of study abroad programs on students' global citizenship. Additionally, the experiences gained by Philippine preservice teachers from international teaching internships supported the development of their competence to become global teachers (Añar et al., 2017; Nurazizah et al., 2021; Tique, 2023). The contradiction between the current study's findings and other studies regarding the impact of overseas experience on the students' global citizenship level may be due to the kind of overseas experience specified in most studies since the present study did not specify the type of overseas experience the preservice teachers had.

Table 14. Relationship Between the Cultural Intelligence and Global Citizenship Levels

Mean Cultural Intelligence Level	Global Citizenship Level	r	P-value	Significance
5.41	3.30	0.487	< 0.001	Significant

Table 14 presents the relationship between the preservice teachers' cultural intelligence and global citizenship levels. The Pearson r correlation result (<0.001) indicates a significant positive correlation between the preservice teachers' CQ and global citizenship. In other words, their CQ and global citizenship affect each other.

Similarly, previous works (e.g., Abo Elazm, 2021; Kaya, 2022; Yüksel & Ereş, 2018) also concluded that the concepts of CQ and global citizenship are positively correlated. According to Kaya (2022), a positive relationship between CQ and global citizenship is expected because both involve respect for differences, intercultural sensitivity, and intercultural competence. In addition, Karataş and Arpacı (2022) concluded that CQ is significant in enhancing social justice perceptions and global citizenship levels. Karataş and Arpacı (2022) and Kaya (2022) argued that cultural intelligence is critical in fostering global citizenship and that having a high CQ makes it easier for individuals to become global citizens.

It is also interesting to note that a separate examination of both scales reveals that the Global Citizenship scores were average despite generally having high CQ scores. The CQS broadly measures an individual's consciousness, knowledge, motivations, and behavior concerning other cultures. Conversely, the Global Citizenship Scale relates to the person acting on global concerns. It thus can be surmised that the preservice teachers, albeit knowledgeable of and competent in cross-cultural scenarios, still have room for improving their participation in global concerns. This means that the preservice teachers still need to tap into their agency.

In Giddens' (1984) structuration theory, agency or human action is essential in continuing social practices or structures and transforming society through reflexive monitoring and rationalizing actions. In the context of this study, the preservice teachers have a high CQ level structurally enabled by their academic training geared towards developing their competence in inclusivity, multiculturalism, and globalization while thriving in the present-day milieu of increasing connectivity and information access through the worldwide web. Still, they are probably confronted with the challenge of practicing their cultural intelligence to effect a meaningful societal transformation.

A possible reason for their lack of agency might be that the preservice teachers function in a personal space. To support this argument, while the items in the CQS focused on one's ability to function personally and interpersonally in any cultural context, the items in the Global Citizenship Scale focused on their stance on global social justice and equality, their knowledge of international issues, and their plans to volunteer, among others, which, in essence, involved thinking of others and the world in general. Thus, the disparity in their scores on both scales suggests that the preservice teachers may improve their global citizenship scores by transcending from their private spaces into the more public spheres of engagement and responsibility.

Conclusion

With the realities of globalization, educational institutions are molding preservice teachers to be culturally and globally competent to better prepare them for multicultural job settings. In this milieu of a globalizing world, the multicultural Philippine society, and the internationalization of Philippine higher education, it is timely and significant to assess the CQ and global citizenship of Philippine preservice teachers to obtain evidence that can help inform Philippine teacher education providers and policymakers about the readiness of would-be teachers to be deployed in multicultural and global settings. To that end, this study was conducted to measure the preservice teachers' overall cultural intelligence and global citizenship levels, to determine the differences in cultural intelligence and global citizenship levels according to ethnic identity, specialization, year level, and overseas experience, and to identify the relationship between cultural intelligence and global citizenship.

The study found that while the preservice teachers obtained high metacognitive, motivational, behavioral, and overall CQ levels, their medium cognitive CQ level is an area for improvement, indicating the need to increase their knowledge about other cultures. As for global citizenship, their average global citizenship level denotes that they need to improve global citizenship attributes such as global competence and global civic engagement, both of which were found to be satisfactory. Of the global citizenship categories, their social responsibility scored the least, obtaining only an average level. This is a matter of concern because the results imply that the preservice teachers lack empathy towards the injustices experienced by others on a global scale. As for demographic variables considered in this study and their interaction with CQ and global citizenship, specialization, year level, and

overseas experience did not substantially impact their CQ levels. The same can be said for global citizenship, except for the year level, which significantly affected their global citizenship levels. When the preservice teachers were grouped according to their ethnic identities, most ethnic groups measured high in their CQ levels but only average for their global citizenship level. Overall, the study identified a positive correlation between cultural intelligence and global citizenship.

Recommendations

Considering the study's findings, government agencies, higher education institutions (HEIs), teacher education institutions (TEIs), and curriculum developers must improve the preservice teachers' CQ to develop their global citizenship attributes. Importance should be placed on improving their cognitive CQ. At a policy level, this can be done by further intensifying the implementation of internationalization strategies, which include ensuring the quality of HEIs, student, faculty, and staff mobility, and global linkages of HEIs, as stipulated in the CHED Memorandum Order No. 55 series of 2016. In particular, and although the study did not find any impact of students' overseas experience on their CQ and global citizenship levels, government agencies and HEIs should increase the opportunities for preservice teachers to participate in study abroad programs or international teaching internships where they can interact with the locals of the host country. Conversely, government agencies, curriculum developers, and HEIs can also boost the students' CQ and global citizenship levels by enriching the academic courses and activities in the university as part of the home-based or campus-based internationalization. Specifically, employing an experiential learning approach in their courses can offer opportunities to expose the preservice teachers to local and global issues and have them undergo critical reflection, which can help translate their cultural intelligence into actions, subsequently developing their global citizenship. Similarly, enhancing the contents and training per year level in professional education subjects will improve the preservice teachers' pedagogical skills, preparing them and making them effective in multicultural education and teaching global citizenship. Aside from these, given the multicultural context of the locality where this study was conducted, HEIs can promote the preservice teachers' cultural intelligence and global citizenship levels by organizing more multicultural activities, events, and projects on campus where students can participate in cross-cultural interactions with diverse students and gain new insights about their roles in the world.

Moreover, future investigations may use other CQ and global citizenship measurements and complement quantitative methods with a qualitative approach to provide points for comparisons with the current study's findings. Additionally, researching the factors behind the CQ and global citizenship levels of various ethnic groups would be valuable. Finally, the impact of other variables, such as socioeconomic status and membership in school organizations, on the students' CQ and global citizenship levels should also be examined.

Limitations

One limitation of this study is that it only utilized a quantitative method to determine the relationship between the preservice teachers' cultural intelligence and global citizenship levels. Moreover, only 316 preservice teachers at a private university in Baguio City, Philippines, participated in the study.

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Authors Contribution Rate

Both authors contributed equally to the completion of the study.

Ethical Approval

Ethical permission (Date: 04.03.2024- Number: SLU-REC 2024-073) was obtained from Saint Louis University Research Ethics Committee for this research.

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