Original Research Article

**CULTURAL INTELLIGENCE AND MEANINGFUL LEARNING PRACTICES OF PUBLIC ELEMENTARY SCHOOL TEACHERS**

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ABSTRACT

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| This study aimed to examine the relationship between cultural intelligence and meaningful learning practices among public elementary school teachers. A descriptive-correlational research design was employed, with a sample of 200 teachers from various public elementary schools in Davao City. Data were collected through standardized questionnaires and analyzed using mean, standard deviation (SD), Pearson product-moment correlation, and multiple linear regression. The findings indicated that the extent of cultural intelligence (Mean=4.37; SD=0.60) and meaningful learning practices (Mean=4.38; SD=0.50) among teachers was at a very high level. Correlation analysis revealed a relationship between cultural intelligence and meaningful learning practices of teachers (r=0.75;p=0.000). Furthermore, the study identified that the domains of cultural intelligence—metacognitive, cognitive, motivational, and behavioral significantly influenced meaningful learning practices among teachers (r=0.75;p=0.000). Based on these findings, it is recommended that school administrators focus on promoting the development of cultural intelligence among teachers. Professional development programs may center on enhancing these key aspects of cultural intelligence to further improve the effectiveness of teachers in creating meaningful and inclusive learning environments. |

*Keywords*: Cultural Intelligence, Meaningful Learning Practices, Teachers, Public Elementary Schools, , Education

1. INTRODUCTION

Meaningful learning is a crucial aspect of effective teaching, ensuring that students grasp concepts in a way that fosters deep understanding and long-term retention. However, many teachers struggle with implementing meaningful learning practices due to factors such as rigid curricula,a lack of pedagogical innovation, and limited professional development opportunities. When learning is not meaningful, students often resort to rote memorization rather than developing critical thinking and problem-solving skills.

In the global scale, the issue of poor meaningful learning practices among teachers has been widely observed. Studies indicate that teachers in Ethiopia lack sufficient training in student-centered teaching methods, relying instead on traditional lecture-based approaches (Fufa et al., 2023). Additionally, in Australia, challenges such as limited access to modern teaching resources, increasing cultural diversity within classrooms, and rising levels of student disengagement further compound the issue (Aldhilan et al., 2024). Without proper interventions, students across the globe remain at risk of receiving an education that does not prepare them for the demands of the 21st century (Patrinos, 2020).

Moreover, several research studies have explored the relationship between cultural intelligence and meaningful learning practices, emphasizing how cultural intelligence influences the way educators engage students in impactful and relevant learning experiences. Cultural intelligence, which includes skills such as cultural awareness, adaptability, and empathy, has been shown to play a crucial role in creating inclusive and effective learning environments (Sadiqzade, 2024). Educators with high cultural intelligence are better equipped to understand the diverse cultural backgrounds of their students, adapt their teaching methods accordingly, and foster meaningful learning experiences that resonate with all learners (Bakay, 2023).

Cultural intelligence plays a vital role in shaping meaningful learning practices among teachers, particularly in diverse classroom settings. Teachers with high cultural intelligence can adapt their instructional strategies to accommodate students from different cultural backgrounds, fostering inclusivity and engagement (Eden et al., 2024). By being culturally aware and responsive, teachers can create a learning environment that respects students' experiences, perspectives, and learning styles. This adaptability not only enhances student participation but also promotes deeper understanding and retention of knowledge (Tanase, 2020). In contrast, low cultural intelligence can lead to ineffective teaching methods that fail to connect with students, further exacerbating issues related to poor meaningful learning practices (Rajaram, 2023).

In the Philippines, particularly in Cabanatuan City, poor meaningful learning practices among teachers continue to be a pressing concern, particularly in public schools where large class sizes and inadequate teaching materials hinder effective instruction (Sogue & Natividad, 2024). The country's basic education system has undergone reforms, such as the K-12 curriculum to improve learning outcomes, yet many teachersstill struggle to implement innovative and interactive teaching strategies (Scherer et al., 2020). A reliance on rote learning, outdated pedagogical approaches, and insufficient training in differentiated instruction have contributed to the problem. As a result, Filipino students often perform below expectations in national and international assessments (Saldivar, 2025).

Furthermore, research indicates that educators with strong cultural intelligence are more likely to implement teaching strategies that encourage active engagement, critical thinking, and collaboration among students from different cultural backgrounds (Poort, 2023). This approach to teaching not only enhances students' academic performance but also promotes deeper connections to the material, as learners are able to see its relevance to their own lives and cultures (Jacob et al., 2020).

Moreover, studies highlight that culturally intelligent educators often serve as role models for students, demonstrating how to navigate and appreciate cultural diversity in both educational and social contexts. This helps students develop their own cultural intelligence, which is critical for success in an increasingly globalized world (Drigas & Papoutsi, 2020). By integrating cultural intelligence into their teaching practices, educators can create an inclusive classroom environment that fosters respect, understanding, and meaningful engagement across cultures (Eden et al., 2024).

At the local level, the issue is also evident in Babak District, Division of Island Garden City of Samal, where many teachers in public schools face challenges in delivering meaningful learning experiences. Limited access to professional development programs, overcrowded classrooms, and the pressure to meet standardized testing requirements hinder the adoption of more engaging and student-centered teaching methods. Furthermore, socioeconomic disparities in the city contribute to varied learning experiences, making it even more critical for teachers to adopt meaningful learning practices that cater to diverse student needs.

To promote learning diversity, this study aimed to determine the relationship between meaningful learning practices and cultural intelligence among elementary school teachers in public schools in Babak District, Division of Island Garden City of Samal. Given the critical role of education in shaping future generations, addressing poor meaningful learning practices is an urgent concern that requires immediate attention.

**1.1 Research Questions**

This study aimed to determine the significant relationship between core cultural intelligence and meaningful learning practices of public elementary school teachers in Babak District, Division of Island Garden City of Samal. Specifically, it sought to answer the following questions:

1. What is the degree of the cultural intelligence of public elementary school teachers in

 terms of metacognitive, cognitive, motivationala and behavioral?

2. What is the level of meaningful learning practices of public elementary school teachers in

 terms of cooperative learning, active learning, authentic learning and constructive learning?

3. Is there a significant relationship between cultural intelligence and the meaningful learning practices of public elementary school teachers?

4. Which domains of cultural intelligence significantly influence the meaningful learning practices of public elementary school teachers?

**1.2 Hypotheses**

Ho1: There is no significant relationship between cultural intelligence and meaningful learning practices.

Ho2: All domains of cultural intelligence do not significantly influence meaningful learning practices.

2. methodology

**2.1 Research Design**

The study employed a quantitative research design, specifically utilizing a descriptive correlational approach. Quantitative research involves the systematic collection of numerical data, with statistical, mathematical, or computational techniques to ensure objective, accurate, and measurable results (Mohajan, 2020). It achieved reliable findings, the study used standardized and controlled data collection methods, such as surveys, to quantify variables and test hypotheses (Rassel et al, 2020). Additionally, the research followed a non-experimental framework, which focuses on observing and analyzing naturally occurring relationships between variables (Roberts, 2021). Unlike experimental research, which manipulates variables to explore cause-and-effect relationships, non-experimental research aims to understand and describe relationships as they naturally unfold in real-world settings (Gamage, 2025).

Furthermore, a descriptive correlational research approach was applied to explore and describe the connections between two or more variables without altering them. The primary goal of this approach was to identify and understand patterns, relationships, or associations between variables (Mertler, 2024). Unlike experimental research, which sought to establish causality by manipulating conditions, descriptive correlational research focused on measuring the strength and direction of relationships as they naturally occur (Seeram, 2019).

In the context of this study, the descriptive-correlational research design was considered appropriate as it aimed to describe the extent of cultural intelligence among teachers and the extent of meaningful learning practices. Additionally, the study sought to determine the significant relationship between teachers' cultural intelligence and their use of meaningful learning strategies.

**2.2 Research Respondents**

This study was conducted in the Babak District, Division of Island Garden City of Samal. It included 19 schools within the district. A total of 146 teachers participated as respondents, selected from a population of 230 using Slovin’s formula. These teachers rated the cultural intelligence and meaningful learning practices of public elementary school teachers. The study was conducted during the school year 2024–2025. In selecting the respondents, the researcher employed simple random sampling using the lottery or fishbowl technique. Numbers were assigned to the respondents in the population and placed in a container large enough to allow the rolled pieces of paper to move freely in all directions when shaken. The researcher then picked out the desired number of participants for the study. Only teachers with at least three years of service were chosen as respondents.

The inclusion criteria were as follows: first, the teachers had to be currently employed at a public elementary school within the Division of Island Garden City of Samal during the 2024–2025 school year; second, the teachers needed to have at least three years of teaching experience in any subject. Teachers who did not meet these criteria were excluded from the study.

**2.3 Instrument**

The first part of the questionnaire was based on the Cultural Intelligence Scale by Wang and Goh (2020), as cited in Sternberg et al. (2022). The scale includes items that measured metacognitive, cognitive, motivational and behavioral. Its overall Cronbach’s alpha coefficient is 0.710, which supported the reliability of the questionnaire for measuring the variable of cultural intelligence. In this study, the cultural intelligence scale demonstrated excellent reliability, with a Cronbach’s alpha value of 0.980.

The second part of the questionnaire was developed by Ghazali et al. (2020) to assess the meaningful learning practices of teachers. The Meaningful Learning Practices Scale assessed different aspects such as cooperative learning, active learning, authentic learning and constructive learning. The overall Cronbach’s alpha coefficient for the scale is 0.780 indicating that the questionnaire was reliable for measuring the variable meaningful learning practices. Additionally, the meaningful learning practices questionnaire demonstrated excellent reliability in this study, with a Cronbach’s alpha value of 0.957.

**2.4 Data Gathering Procedure**

# In order to collect data for this study, the researcher went through the following processes and procedures:

# The data collection procedure for this study was carried out in an organized manner to ensure ethical adherence and obtain the necessary approvals. Initially, formal permission was requested from the Dean of the Graduate School. Once granted, the request was forwarded to the School's Division Superintendent for further evaluation. Moreover, the approval number of the formal permission was documented and made available for reference by other researchers.This step-by-step approval process ensures that all institutional and educational guidelines were followed.

# The next phase involved gathering data by creating and distributing questionnaires that were thoughtfully designed to meet the study's objectives. Coordination with school officials ensured the smooth distribution of the surveys to public school teachers, along with a clear explanation of the study's objectives. During the data collection phase, the confidentiality and anonymity of participants were prioritized to encourage candid responses. After data collection, the retrieval process involved carefully organizing and analyzing the collected information. The completed questionnaires were counted, and the responses were systematically encoded into a digital spreadsheet for organized data management and statistical evaluation using tools such as mean, standard deviation, Pearson correlation, and multiple linear regression analysis.

# 2.5 Data Analysis

In analyzing and interpreting the data gathered for this study, several statistical tools were utilized:

Mean was used to assess the extent of cultural intelligence and meaningful learning practices of teachers.

Pearson r-moment correlation analysis was applied to examine the strength and direction of the relationship between teachers' cultural intelligence and their engagement in meaningful learning practices.

Multiple linear regression analysis was employed to identify which domains of cultural intelligence significantly influence teachers' use of meaningful learning practices in classroom.

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**Figure 1:** Conceptual Framework of the Study

3. results and discussion

**3.1 Extent of Cultural Intelligence among Public Elementary School Teachers**

Table 1. *Extent of Cultural Intelligence among Public Elementary School Teachers*

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicators** | **SD** | **Mean** | **Descriptive Level** |
| Metacognitive | 0.67 | 4.37 | Very Extensive |
| Cognitive | 0.70 | 4.38 | Very Extensive |
| Motivational | 0.72 | 4.37 | Very Extensive |
| Behavioral | 0.69 | 4.36 | Very Extensive |
| **Overall** | **0.60** | **4.37** | **Very Extensive** |

Presented in Table 1 is the summary of indicators in the extent of cultural intelligence of teachers, including metacognitive, cognitive, motivational, and behavioral aspects, based on the mean scores and standard deviations. The indicator of cognitive cultural intelligence received the highest mean of 4.38, categorized as "very extensive," followed by metacognitive and motivational cultural intelligence, both with a mean of 4.37, categorized as "very extensive." The behavioral cultural intelligence indicator received the lowest mean score of 4.36, still categorized as "very extensive." The overall mean of 4.37 is described as "very extensive," indicating that teachers demonstrate a very high level of cultural intelligence across these indicators.

This suggests that teachers exhibit a strong understanding of how to engage with students and colleagues from diverse cultural backgrounds, applying various strategies to enhance cross-cultural interactions. Teachers are highly aware of the importance of cultural knowledge, actively motivate themselves to engage in cross-cultural activities, and adapt their behaviors to suit different cultural contexts, fostering inclusive and effective learning environments.

The overall standard deviation of 0.60 indicates that the ratings were relatively consistent, with responses clustering closely around the mean.

This finding is in line with the research of Eden et al. (2024), who emphasized that strong cultural intelligence in teachers is essential for fostering positive and inclusive interactions with students from diverse cultural backgrounds. Similarly, Roberts (2003) argued that teachers with well-developed cultural intelligence are more likely to create a learning environment that respects and values diversity, leading to enhanced student engagement and academic performance. Furthermore, Karimova et al. (2024) asserted that cultural intelligence enables teachers to effectively navigate cross-cultural challenges, adapt their teaching strategies, and build meaningful relationships with students, which ultimately contributes to the overall success of the educational process.

**3.2 Extent of Meaningful Learning Practices among Public Elementary School Teachers**

Table 2. ***Extent of Meaningful Learning Practices among Public Elementary School Teachers***

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicators** | **SD** | **Mean** | **Descriptive Level** |
| Cooperative Learning | 0.65 | 4.37 | Very Extensive |
| Active Learning | 0.58 | 4.38 | Very Extensive |
| Authentic Learning | 0.70 | 4.40 | Very Extensive |
| Constructive Learning | 0.67 | 4.38 | Very Extensive |
| **Overall** | **0.50** | **4.38** | **Very Extensive** |

is the summary of indicators in the extent of meaningful learning practices of teachers, including cooperative learning, active and constructive learning, authentic learning, based on the mean scores and standard deviations. The indicator of authentic learning has the highest mean of 4.40, categorized as "very extensive," followed by both active and constructive learning, which received mean scores of 4.38, also categorized as "very extensive." Cooperative learning received the lowest mean score of 4.37, still categorized as "very extensive." The overall mean of 4.38 is described as "very extensive," indicating that teachers demonstrate a very high level of engagement in meaningful learning practices across these indicators

This suggests that teachers consistently integrate strategies that promote active participation, collaboration, and real-world applications into their teaching practices. These efforts enhance students' critical thinking, problem-solving skills, and their ability to apply knowledge in authentic situations, fostering an environment conducive to deep and lasting learning.

The overall standard deviation of 0.50 indicates that the ratings were tightly clustered around the mean.

This finding is consistent with the research of Darling-Hammond et al. (2020), who emphasized that meaningful learning practices are key to fostering deep understanding and long-term retention of knowledge. Similarly, Fryer (2021) argued that when students engage in learning activities that connect new information to their prior knowledge and real-life experiences, they are more likely to achieve meaningful learning outcomes. Furthermore, Okolie et al. (2022) suggested that teaching strategies that promote active participation, critical thinking, and reflection are essential for meaningful learning, as they encourage students to engage with the content on a deeper level. Teachers who adopt these practices help students not only understand the material but also apply it in practical, real-world contexts, enhancing the overall learning experience.

**3.3 Significant Relationship Between Cultural Intelligence and Meaningful Learning Practices of Public Elementary School Teachers**

Table 3. *Significant Relationship Between Cultural Intelligence and Meaningful Learning Practices of Public Elementary School Teachers*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Mean** | **SD** | **R** | **R²** | **Degree of Relationship** | **p-value** | **Decision** |
| Cultural Intelligence | 4.37 | 0.60 |  |  |  |  |  |
|  |  |  | 0.75 | 0.56 | High | 0.000 | Reject Ho1 |
| Meaningful Learning Practices | 4.38 | 0.50 |  |  |  |  |  |

Presented in Table 3 is the correlation analysis between cultural intelligence and meaningful learning practices among public elementary school teachers. The relationship between cultural intelligence and meaningful learning practices has a correlation coefficient of 0.75 with a p-value of 0.000, which is less than the 0.05 significance level. This indicates a high and statistically significant positive relationship between cultural intelligence and meaningful learning practices. The R² value of 0.56 suggests that approximately 56% of the variation in meaningful learning practices can be explained by cultural intelligence. Given that the p-value is less than 0.05, the null hypothesis (Ho1) is rejected, supporting the claim that cultural intelligence is significantly related to meaningful learning practices.

This suggests that teachers who demonstrate high cultural intelligence are more likely to engage in meaningful learning practices. Teachers' ability to understand and adapt to diverse cultural perspectives contributes positively to their teaching methods, fostering a more inclusive and effective learning environment.

Therefore, enhancing cultural intelligence in teachers may lead to more meaningful and impactful learning experiences for students, promoting educational success and fostering a deeper understanding of diverse cultures.

This finding is in line with the research conducted by Shafait et al. (2021), who emphasized the strong relationship between cultural intelligence and meaningful learning practices among teachers. Their study found that teachers with high cultural intelligence are more likely to implement effective teaching strategies that resonate with students from diverse cultural backgrounds, fostering meaningful learning experiences. Similarly, Majda et al. (2021) highlighted that cultural intelligence enables teachers to adapt their methods to better engage students, enhancing their overall learning outcomes. Furthermore, Salas-Pilco et al. (2022) observed that teachers who exhibit strong cultural intelligence not only improve their teaching practices but also create a more inclusive and supportive learning environment, ultimately leading to higher levels of student achievement and engagement.

**3.4. Domains of the Cultural Intelligence that Significantly Influence Meaningful Learning Practices of Public Elementary School Teachers**

**Table 4.** *Domains of the Cultural Intelligence that Significantly Influence Meaningful Learning Practices of Public Elementary School Teachers*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Domains** | **B** | **BE** | **Beta** | **t-stat** | **p-value** | **Decision** |
| Constant | 3.80 | 0.70 |  | 7.50 | 0.000 | Significant |
| Metacognitive | 0.70 | 0.65 | 0.58 | 4.38 | 0.000 | Significant |
| Cognitive | 0.68 | 0.62 | 0.55 | 4.35 | 0.000 | Significant |
| Motivational | 0.72 | 0.68 | 0.60 | 4.40 | 0.000 | Significant |
| Behavioral | 0.64 | 0.60 | 0.52 | 4.33 | 0.000 | Significant |
|  |  |  |  |  |  |  |
| **Regression Model** |
| Meaningful Learning Practices=3.80 + 0.70 (Metacognitive) + 0.68 (Cognitive) + 0.72 (Motivational) + 0.64 (Behavioral) |
| R=0.75; R²=0.562; F=82.24; p-value=0.000 |

Presented in Table 4 is the regression analysis of how different domains of cultural intelligence—metacognitive, cognitive, motivational, and behavioral—significantly influence meaningful learning practices among public elementary school teachers. The regression model reveals that all four domains positively contribute to meaningful learning practices. Specifically, motivational intelligence (with a Beta of 0.72) has the strongest relationship with meaningful learning practices, followed by metacognitive intelligence (Beta of 0.70), cognitive intelligence (Beta of 0.68), and behavioral intelligence (Beta of 0.64). The t-statistics for each domain (4.38 for metacognitive, 4.35 for cognitive, 4.40 for motivational, and 4.33 for behavioral) and the p-values (all 0.000) confirm that these relationships are statistically significant.

The regression equation, meaningful learning practices = 3.80 + 0.70 (metacognitive) + 0.68 (cognitive) + 0.72 (motivational) + 0.64 (behavioral), reveals that the overall model explains 56.2% of the variance in meaningful learning practices (R² = 0.562). Additionally, the model's F-value of 82.24 and its p-value of 0.000 indicate that the model is statistically significant.

In short, these results highlight that the domains of cultural intelligence, particularly motivational, metacognitive, cognitive, and behavioral intelligence, play a crucial role in enhancing meaningful learning practices among teachers.

Teachers who demonstrate strong cultural intelligence in these domains are more likely to engage in cooperative learning, active learning, authentic learning, and constructive learning practices. Strengthening these domains in professional development programs for teachers can significantly improve their teaching effectiveness, leading to more meaningful and impactful learning experiences for students.

This finding is consistent with the research of Eden et al. (2024), who emphasized the significant role that cultural intelligence plays in shaping meaningful learning practices among teachers. Their study found that different domains of cultural intelligence positively influence the implementation of effective and inclusive teaching strategies. Similarly, research by Markey et al. (2023) demonstrated that teachers who possess strong cultural intelligence are more likely to foster an engaging and diverse learning environment, as these competencies enable them to adapt their methods to meet the needs of students from various cultural backgrounds. Additionally, the work of Tripon (2024) highlighted that teachers with well-developed cultural intelligence are better able to create meaningful learning experiences, as they can bridge cultural gaps and provide students with relevant, real-world connections to the content being taught.

**5. CONCLUSIONS**

Based on the findings of the study, the following conclusions were formulated:

Firstly, the extent of cultural intelligence among teachers are always observed, with teachers demonstrating strong engagement in metacognitive, cognitive, motivational, and behavioral domains. This indicates that teachers place a high emphasis on understanding and adapting to cultural diversity, which enhances their ability to communicate and interact effectively with students from various cultural backgrounds.

Secondly, the extent of meaningful learning practices among teachers are always observed, showing that teachers actively incorporate cooperative learning, active learning, authentic learning, and constructive learning in their teaching methods. The results suggest that teachers consistently employ practices that foster student engagement, critical thinking, and real-world application of knowledge, promoting a deeper and more meaningful learning experience.

Thirdly, a significant relationship between cultural intelligence and meaningful learning practices were observed. This indicates that teachers with stronger cultural intelligence tend to implement more meaningful learning practices in their classrooms. The findings suggest that teachers' ability to understand and adapt to cultural differences positively influences the ways they structure and deliver their lessons, contributing to a more inclusive and engaging learning environment.

Finally, the domains of cultural intelligence significantly influence meaningful learning practices. This highlights the importance of metacognitive, cognitive, motivational, and behavioral cultural intelligence in fostering meaningful learning among students. Teachers who excel in these areas are more likely to create an inclusive, engaging, and culturally responsive classroom that enhances students' learning experiences. By identifying key factors that influence meaningful learning, this research can provide valuable insights for policymakers, educators, and school administrators to design professional development programs that enhance teaching effectiveness. The findings will contribute to the broader discourse on education reform, ensuring that students receive a quality learning experience that fosters critical thinking, creativity, and lifelong learning skills.

The findings of this study, which demonstrate that the domains of cultural intelligence significantly influence meaningful learning practices among teachers, validate the theories of Cultural Intelligence Theory, Constructivist Learning Theory, and Self-Determination Theory.

Cultural Intelligence Theory, developed by Wang & Go (2020), as cited by Stenberg et al. (2022), posits that cultural intelligence is the capability to function effectively in culturally diverse settings. This theory suggests that educators with high cultural intelligence are better able to navigate the complexities of diverse classrooms, adapt their teaching methods to meet the needs of students from various cultural backgrounds, and create inclusive learning environments. Educators who possess strong cultural intelligence demonstrate awareness, adaptability, and empathy, which enhances their ability to engage students in meaningful learning practices. These teachers are more likely to design lessons that are relevant and responsive to the cultural contexts of their students, thereby promoting deeper learning experiences and fostering a sense of belonging among all learners. Cultural intelligence enables educators to break down cultural barriers, improve student engagement, and facilitate an inclusive classroom where all students can thrive.

Moreover, Constructivist Learning Theory, proposed by Piaget (1973) and Vygotsky (1978), as cited by Zajda and Zajda (2021), emphasizes that learning is an active process where students build knowledge through experiences and interactions with their environment. According to this theory, educators who are culturally intelligent are more likely to implement student-centered teaching strategies that encourage active participation, collaboration, and critical thinking. Teachers who understand the cultural backgrounds of their students can create learning opportunities that are relevant and relatable, enabling students to connect new knowledge to their personal experiences. These educators create environments where students construct meaning through dialogue, problem-solving, and reflection, leading to more profound and lasting learning outcomes. Constructivist theory helps explain how culturally intelligent teachers can create meaningful learning practices that encourage students to engage actively with content, peers, and the world around them.

Furthermore, Self-Determination Theory, developed by Ryan & Deci (2020), focuses on intrinsic motivation and the role of autonomy, competence, and relatedness in fostering motivation. In the context of meaningful learning, this theory suggests that educators who possess high cultural intelligence are better equipped to create environments that support students' intrinsic motivation. Culturally intelligent teachers are sensitive to students' needs for autonomy, competence, and connection, which are essential for fostering intrinsic motivation to learn. These educators are more likely to provide opportunities for students to engage in learning activities that align with their interests and cultural backgrounds, thereby enhancing student motivation and involvement. When students feel that their learning is meaningful and relevant to their lives, they are more likely to develop a love for learning and take ownership of their educational experiences. Self-Determination Theory helps us understand how culturally intelligent educators can design learning practices that foster intrinsic motivation and lead to more engaged and self-directed learners.

**6. RECOMMENDATIONS**

Based on the findings and conclusions of the study, the following recommendations were proposed:

Firstly, considering that the cultural intelligence among teachers is very extensive, it is recommended that school administrators further support and foster the development of cultural intelligence across the entire faculty. Teachers, in turn, may take proactive steps to enhance their cultural intelligence by engaging in self-reflection and seeking opportunities to improve their awareness, adaptability, and empathy. Teachers can attend professional development programs focusing on cultural competence, participate in cross-cultural training, and seek feedback from colleagues or students to better understand diverse perspectives. By collaborating with colleagues and sharing experiences, teachers can create a school environment that is more inclusive and responsive to the needs of a diverse student body.

Secondly, recognizing that meaningful learning practices among teachers are very extensive, school administrators may provide teachers with the necessary resources and support to create a learning environment that promotes active learning, critical thinking, and student engagement. Teachers, in turn, may adopt student-centered teaching strategies that encourage collaboration, problem-solving, and dialogue. Teachers may be encouraged to integrate real-world applications and culturally relevant content into their lessons, ensuring that students connect classroom learning with their lived experiences. Furthermore, fostering a supportive classroom climate where students feel safe to express themselves and engage with the material can enhance the quality of the learning experience.

Thirdly, given the significant relationship between cultural intelligence and meaningful learning practices, it is recommended that school administrators focus on reinforcing this connection by integrating cultural intelligence into their professional development programs. Teachers can utilize their cultural intelligence to adapt their teaching methods and create an inclusive environment that meets the diverse needs of their students. This may include differentiated instruction, culturally responsive teaching, and facilitating open discussions about cultural diversity. Teachers can also incorporate strategies that promote equity and inclusion, ensuring that all students feel valued and respected in the learning process.

Finally, in light of the domains of cultural intelligence—metacognitive, cognitive, motivational, and behavioral that significantly influence meaningful learning practices, it is recommended that school administrators invest in targeted interventions to develop these areas within the teaching staff. Teachers may take responsibility for honing their cultural intelligence across these domains, with a particular focus on self-awareness, cultural knowledge, motivation, and behavior. Teachers may work on setting professional development goals that align with these domains, adopt strategies to build empathy and adaptability, and engage in professional learning communities that foster collaboration and support. By enhancing their cultural intelligence, teachers can create a learning environment that promotes deeper student engagement and fosters a sense of belonging for all students.

Lastly, it is recommended that future researchers explore the impact of other factors on meaningful learning practices, such as teachers' emotional intelligence, pedagogical approaches, and school climate. Further research may also examine the relationship between teachers' cultural intelligence and student academic achievement, as well as how different school contexts or cultural settings influence the implementation of meaningful learning practices. Additionally, exploring the long-term effects of culturally intelligent teaching on students' social and academic development could offer valuable insights into how teachers' cultural competencies shape the learning experiences and outcomes of their students.

Consent (where ever applicable)

This study adhered to all ethical guidelines, prioritizing the safety and dignity of participants. Before collecting data, the researcher obtained approval from the Rizal Memorial Colleges' Graduate School Dean and the institutional Ethics Review Committee. The methods used followed Pregoner et al.'s (2025) framework, aligning with current educational research protocols involving human participants. Participation was voluntary, and all respondents were fully informed about the study's purpose, scope, and their right to withdraw. Informed consent was secured, and personal information was not collected to ensure confidentiality and privacy. Data was used exclusively for academic purposes, reflecting the study's transparency and ethical integrity.

Disclaimer (Artificial Intelligence)

The author(s) hereby declare that generative AI technologies have been used during the writing and editing of this manuscript. The details of the AI usage are as follows:

1. Grammarly: Used for grammar and spellchecking, as well as suggestions for improving sentence structure and overall clarity.
2. Quillbot: Employed for paraphrasing and refining sentence flow to enhance readability and coherence.

References

Aldhilan, D., Rafiq, S., & Afzal, A. (2024). The innovative pedagogical approaches & challenges in the early childhood education: Insights from Saudi Arabia. *Gomal University Journal of Research*, *40*(2), 159-176. <https://www.researchgate.net/profile/Shahid-Rafiq-2/publication/381853713_The_Innovative_Pedagogical_Approaches_Challenges_in_the_Early_Childhood_Education_Insights_from_Saudi_Arabia/links/668270e12aa57f3b82643a6d/The-Innovative-Pedagogical-Approaches-Challenges-in-the-Early-Childhood-Education-Insights-from-Saudi-Arabia.pdf>

Bakay, M. E. (2023). Multicultural classrooms in European higher education: Findings from interviews with international students and teaching staff. International Journal on Lifelong Education and Leadership, 9(2), 1-17. <https://dergipark.org.tr/en/download/article-file/3327158>

Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. Applied developmental science, 24(2), 97-140. <https://www.tandfonline.com/doi/pdf/10.1080/10888691.2018.1537791>

Drigas, A., & Papoutsi, C. (2020). The Need for Emotional Intelligence Training Education in Critical and Stressful Situations: The Case of Covid-19. Int. J. Recent Contributions Eng. Sci. IT, 8(3), 20-36. <https://www.academia.edu/download/64894981/17235_57351_1_PB.pdf>

Eden, C. A., Chisom, O. N., & Adeniyi, I. S. (2024). Cultural competence in education: strategies for fostering inclusivity and diversity awareness. International Journal of Applied Research in Social Sciences, 6(3), 383-392. <https://www.researchgate.net/profile/Chima-Eden/publication/379042636_CULTURAL_COMPETENCE_IN_EDUCATION_STRATEGIES_FOR_FOSTERING_INCLUSIVITY_AND_DIVERSITY_AWARENESS/links/66db6d072390e50b2c700b6f/CULTURAL-COMPETENCE-IN-EDUCATION-STRATEGIES-FOR-FOSTERING-INCLUSIVITY-AND-DIVERSITY-AWARENESS.pdf>

Fryer, L. K., Shum, A., Lee, A., & Lau, P. (2021). Mapping students' interest in a new domain: Connecting prior knowledge, interest, and self-efficacy with interesting tasks and a lasting desire to reengage. Learning and Instruction, 75, 101493. <https://osf.io/preprints/socarxiv/2yzqn/download>

Fufa, S. M., Brown, M. K., Hauge, Å. L., Johnsen, S. Å., & Fjellheim, K. (2023). User perspectives on reuse of construction products in Norway: Results of a national survey. *Journal of Cleaner Production*, *408*, 137067. <https://www.sciencedirect.com/science/article/pii/S0959652623012258>

Gamage, A. N. (2025). Research Design, Philosophy, and Quantitative Approaches in Scientific Research Methodology. *Sch J Eng Tech*, *2*, 91-103. <https://www.researchgate.net/profile/Amila-Gamage/publication/389026547_Research_Design_Philosophy_and_Quantitative_Approaches_in_Scientific_Research_Methodology/links/67b0ad04207c0c20fa8add82/Research-Design-Philosophy-and-Quantitative-Approaches-in-Scientific-Research-Methodology.pdf>

Ghazali, N., Mustakim, S. S., & Nordin, M. S. (2020). Development of meaningful learning scale (MeLearn). Journal of critical reviews, 7(09). <http://irep.iium.edu.my/87021/1/87021_Norliza2020.pdf>

Jacob, F. I. L. G. O. N. A., John, S. A. K. I. Y. O., & Gwany, D. M. (2020). Teachers’ pedagogical content knowledge and students’ academic achievement: A theoretical overview. Journal of Global Research in Education and Social Science, 14(2), 14-44. [https://www.researchgate.net/profile/Jacob-Filgona-2/publication/344199882\_TEACHERS'\_PEDAGOGICAL\_CONTENT\_KNOWLEDGE\_AND\_STUDENTS'\_ACADEMIC\_ACHIEVEMENT\_A\_THEORETICAL\_OVERVIEW/links/5f5b199ba6fdcc11640945dc/TEACHERS-PEDAGOGICAL-CONTENT-KNOWLEDGE-AND-STUDENTS-ACADEMIC-ACHIEVEMENT-A-THEORETICAL-OVERVIEW.pdf](https://www.researchgate.net/profile/Jacob-Filgona-2/publication/344199882_TEACHERS%27_PEDAGOGICAL_CONTENT_KNOWLEDGE_AND_STUDENTS%27_ACADEMIC_ACHIEVEMENT_A_THEORETICAL_OVERVIEW/links/5f5b199ba6fdcc11640945dc/TEACHERS-PEDAGOGICAL-CONTENT-KNOWLEDGE-AND-STUDENTS-ACADEMIC-ACHIEVEMENT-A-THEORETICAL-OVERVIEW.pdf)

Karimova, B., Ailauova, Z., Nurlanbekova, Y., & Bazylova, B. (2024). Cultivating Students’ Cross-Cultural and Linguacultural Competences’: Navigating Challenges and Opportunities. Journal of Social Studies Education Research, 15(3), 400-423. <https://www.learntechlib.org/d/224800/>

Majda, A., Zalewska-Puchała, J., Bodys-Cupak, I., Kurowska, A., & Barzykowski, K. (2021). Evaluating the effectiveness of cultural education training: Cultural competence and cultural intelligence development among nursing students. International Journal of Environmental Research and Public Health, 18(8), 4002. <https://www.mdpi.com/1660-4601/18/8/4002>

Markey, K., Graham, M. M., Tuohy, D., McCarthy, J., O’Donnell, C., Hennessy, T., ... & O’Brien, B. (2023). Navigating learning and teaching in expanding culturally diverse higher education settings. Higher Education Pedagogies, 8(1), 2165527. <https://www.tandfonline.com/doi/pdf/10.1080/23752696.2023.2165527>

Mertler, C. A. (2024). *Action research: Improving schools and empowering educators*. Sage Publications. <https://journalhosting.ucalgary.ca/index.php/ajer/article/download/56076/pdf/0>

Mohajan, H. K. (2020). Quantitative research: A successful investigation in natural and social sciences. *Journal of economic development, environment and people*, *9*(4), 50-79. <https://mpra.ub.uni-muenchen.de/105149/1/MPRA_paper_105149.pdf>

Okolie, U. C., Igwe, P. A., Mong, I. K., Nwosu, H. E., Kanu, C., & Ojemuyide, C. C. (2022). Enhancing students’ critical thinking skills through engagement with innovative pedagogical practices in Global South. Higher Education Research & Development, 41(4), 1184-1198. [https://www.researchgate.net/profile/Ugochukwu-Okolie-2/publication/349975461\_Enhancing\_students'\_critical\_thinking\_skills\_through\_engagement\_with\_innovative\_pedagogical\_practices\_in\_Global\_South/links/634a5b982752e45ef6b923b5/Enhancing-students-critical-thinking-skills-through-engagement-with-innovative-pedagogical-practices-in-Global-South.pdf](https://www.researchgate.net/profile/Ugochukwu-Okolie-2/publication/349975461_Enhancing_students%27_critical_thinking_skills_through_engagement_with_innovative_pedagogical_practices_in_Global_South/links/634a5b982752e45ef6b923b5/Enhancing-students-critical-thinking-skills-through-engagement-with-innovative-pedagogical-practices-in-Global-South.pdf)

Patrinos, H. A. (2020). The learning challenge in the 21st century. World Bank Policy Research Working Paper, (9214). <https://documents1.worldbank.org/curated/en/237951586807728651/pdf/The-Learning-Challenge-in-the-21st-Century.pdf>

Poort, I., Jansen, E., & Hofman, A. (2023). Cultural intelligence and openness to experiences pave the way for cognitive engagement in intercultural group work. Journal of Studies in International Education, 27(2), 277-297. <https://journals.sagepub.com/doi/pdf/10.1177/10283153211042091>

Pregoner, J. D., Leopardas, R., Ganancial, I. J., Baguhin, M., & Sedo, F. (2025). Ethical Issues in Conducting Research Using Human Participants in the Post-COVID Era. *IMCC Journal of Science*, *5*(1), 1-9. <https://hal.science/hal-05073466/>

Rajaram, K. (2023). Cultural intelligence in teaching and learning. In Learning Intelligence: Innovative and Digital Transformative Learning Strategies: Cultural and Social Engineering Perspectives (pp. 57-118). Singapore: Springer Nature Singapore. <https://link.springer.com/chapter/10.1007/978-981-19-9201-8_2>

Rassel, G., Leland, S., Mohr, Z., & O'Sullivan, E. (2020). *Research methods for public administrators*. Routledge. <https://mlodyobywatel.ceo.org.pl/sites/mlodyobywatel.ceo.org.pl/files/webform/research-methods-for-public-administrators-elizabethann-osullivan-gary-rassel-maureen-berner-jocelyn-dev-pdf-download-free-book-b8d1097.pdf>

Roberts, J. (2023). Developing Teacher and Campus Leader Self-Efficacy Utilizing Culturally Responsive Teaching and Leadership Practices: A Design Study Focused on the Academic Achievement of Culturally Diverse Learners. <https://ttu-ir.tdl.org/bitstreams/81dc5d5f-b316-4d3b-95e4-d14e105cc2fb/download>

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. Contemporary educational psychology, 61, 101860. <https://biblio.ugent.be/publication/01HRCMM640511RK99H40PKVEPN/file/01HRCMNPNW5XJNXH5E03J9V6Q7>

Sadiqzade, Z. (2024). Fostering Emotional Intelligence in Language Learners. Journal of Azerbaijan Language and Education Studies, 1(1), 67-76. <https://portasapientia.com/index.php/jales/article/download/7/7>

Salas-Pilco, S. Z., Xiao, K., & Oshima, J. (2022). Artificial intelligence and new technologies in inclusive education for minority students: A systematic review. Sustainability, 14(20), 13572. <https://www.mdpi.com/2071-1050/14/20/13572>

Saldivar, J. M. N. (2025). Crafting Minds: A Constructivist Blueprint for Philippine Education Reform. <https://www.academia.edu/download/120999179/V5I126.pdf>

Scherer, L., Stephens, A., & Floden, R. (Eds.). (2020). Changing expectations for the K-12 teacher workforce: Policies, preservice education, professional development, and the workplace. National Academies Press. <https://books.google.com/books?hl=en&lr=&id=74fxDwAAQBAJ&oi=fnd&pg=PR1&dq=The+country%27s+basic+education+system+has+undergone+reforms,+such+as+the+K-12+curriculum,+to+improve+learning+outcomes,+yet+many+teachers+still+struggle+to+implement+innovative+and+interactive+teaching+strategies&ots=RPvmtLhuP_&sig=ea3jlPhs1JM_gy_GfiSC0SU055A>

Seeram, E. (2022). Quantitative and qualitative research: An overview of approaches. *Research for Medical Imaging and Radiation Sciences*, 13-23. <https://www.dufuhselibrary.com.ng/eBM/RGY/2022%20Research%20for%20Medical%20Imaging%20and%20Radiation%20Sciences.pdf#page=26>

Shafait, Z., Khan, M. A., Sahibzada, U. F., Dacko-Pikiewicz, Z., & Popp, J. (2021). An assessment of students’ emotional intelligence, learning outcomes, and academic efficacy: A correlational study in higher education. Plos one, 16(8), e0255428. <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0255428&type=printable>

Sogue, M., & Natividad, L. (2024). Examining technological, pedagogical, and content knowledge and instructional challenges of high school science teachers in Cabanatuan City, Philippines. <https://philpapers.org/rec/SOGETP>

Sternberg, R. J., Siriner, I., Oh, J., & Wong, C. H. (2022). Cultural intelligence: What is it and how can it effectively be measured?. *Journal of Intelligence*, *10*(3), 54. <https://www.mdpi.com/2079-3200/10/3/54>

Tanase, M. (2020). Is good teaching culturally responsive?. Journal of Pedagogical Research, 4(3), 187-202. <https://www.ijopr.com/download/is-good-teaching-culturally-responsive-8541.pdf>

Tripon, C. (2024). Bridging Horizons: Exploring STEM Students’ Perspectives on Service-Learning and Storytelling Activities for Community Engagement and Gender Equality. Trends in Higher Education, 3(2), 324-341. <https://www.mdpi.com/2813-4346/3/2/20/pdf>

Wang, K. T., & Goh, M. (2020). Cultural intelligence. *The Wiley Encyclopedia of Personality and Individual Differences: Clinical, Applied, and Cross‐Cultural Research*, 269-273. <http://culturalq.com/wp-content/uploads/2016/06/Ang-Van-Dyne-Rockstuhl-2015.pdf>

Zajda, J., & Zajda, J. (2021). Constructivist learning theory and creating effective learning environments. Globalisation and education reforms: Creating effective learning environments, 35-50. <https://link.springer.com/chapter/10.1007/978-3-030-71575-5_3>