Profiling Multiple Intelligences of Senior High School Students: Basis for Differentiated Instruction in a Philippine Diocesan School

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Abstract

This study examined the multiple intelligences of 100 Grade 12 Senior High School students at a private school in Rizal, Zamboanga del Norte during the school year 2025–2026. Employing a quantitative descriptive survey design with total enumeration sampling, the research utilized the Multiple Intelligences Survey (McKenzie, 1999) to measure eight domains: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic. Results revealed that intrapersonal intelligence (M = 3.65, High) and interpersonal intelligence (M = 3.46, High) were the most dominant, while logical-mathematical intelligence (M = 2.71, Moderate) was the least developed. Other intelligence, including naturalistic, musical, bodily-kinesthetic, linguistic, and spatial, scored at moderate levels, indicating a balanced but varied profile. The findings suggest that learners excel more in reflective and relational capacities than in analytical reasoning. These results reinforce the value of differentiated instruction in addressing diverse learner needs. The study contributes to the realization of Sustainable Development Goal 4 (Quality Education) and aligns with the Philippine Harmonized National R&D Agenda (2022–2028) by promoting inclusive, learner-centered pedagogy.

Keywords and phrases: *Multiple Intelligences; Senior High School; Intrapersonal; Interpersonal; Logical-Mathematical; Differentiated Instruction; Philippines; Sustainable Development Goal 4*

Introduction

The traditional concept of intelligence, often measured through IQ, has long been critiqued for its narrow focus on linguistic and logical-mathematical abilities. In contrast, Howard Gardner's Theory of Multiple Intelligences (MI) reframes intelligence as a multifaceted construct encompassing eight domains: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic (McKenzie, 1999). This broader framework has significant implications for education, as it recognizes that students possess diverse strengths that can be nurtured through differentiated instruction.

In the Philippines, the Department of Education (DepEd) emphasizes learner-centered pedagogy under the K to 12 curriculum. However, classroom practice often continues to privilege traditional academic competencies, leaving other intelligence domains underutilized. Recent Philippine studies underscore the relevance of MI in enhancing learning outcomes. Toledo (2023) showed that differentiated instruction based on MI improved performance in Science, while Malapad (2021) demonstrated that modules integrating MI principles fostered greater student engagement. Similarly, Aquino (2024) observed that MI contributes to academic performance and learner self-awareness, though relationships vary by context. These findings suggest that MI profiling can provide practical insights for curriculum design and teacher practice.

At the same time, international research confirms the cross-cultural applicability of MI theory. Erdem and Keklik (2020) reported that prospective teachers in Turkey scored highest in interpersonal and intrapersonal intelligences, while Berlian et al. (2022) found similar results among Indonesian tutors. Ziauddin (2024) further highlighted the importance of culturally validating MI instruments, showing variations in intelligence manifestations across contexts. Together, these studies reinforce the utility of MI in promoting inclusive and equitable education.

Despite growing global and local research, there is limited empirical data on MI profiling in private diocesan schools in the Philippines. Such schools serve diverse communities and emphasize both academic and values-oriented instruction, making them a relevant context for investigating MI. This study therefore sought to profile the multiple intelligences of Grade 12 Senior High School students at a private school in Rizal, Zamboanga del Norte. By identifying dominant and least developed intelligences, the study aims to inform differentiated instructional strategies, contribute to the goals of Sustainable Development Goal 4 (Quality Education), and align with the Philippine Harmonized National R&D Agenda (HNRDA 2022–2028) on educational equity and innovation.

Methods and Materials

This study employed a quantitative descriptive survey design, which was appropriate for profiling the multiple intelligences of learners by systematically collecting and analyzing numerical data. The design allowed the researcher to describe patterns of strengths and weaknesses across intelligence domains without inferring causality.

Research Locale

The study was conducted at a private institution located in Rizal, Zamboanga del Norte, Philippines. The institution offers both basic and tertiary education, and its Senior High School program provides an ideal environment for examining learner diversity at the transition stage before tertiary studies or employment.

Respondents and Sampling

The respondents consisted of 100 Grade 12 Senior High School students enrolled during the school year 2025–2026. Given the manageable size of the population, the study utilized total enumeration sampling, ensuring complete coverage of the cohort and avoiding sampling bias.

Research Instrument

Data were gathered using the Multiple Intelligences Survey originally developed by McKenzie (1999). The instrument measures eight domains of intelligence—linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic—through a series of Likert-type items. The tool has been validated and applied in numerous international and Philippine studies (Erdem & Keklik, 2020; Berlian et al., 2022; Toledo, 2023; Aquino, 2024). For this study, the instrument was adopted in its original form to preserve validity and comparability with related research.

Data Gathering Procedure

Prior to data collection, approval was secured from the administration. Respondents were briefed on the purpose of the study, and informed consent was obtained in compliance with the Data Privacy Act of 2012 (RA 10173) and institutional ethical standards. Questionnaires were administered in classrooms during scheduled periods, with researchers available to clarify items as needed. Completed surveys were collected immediately to maximize response accuracy and retrieval.

Data Analysis

Responses were encoded and processed using descriptive statistics, specifically mean and standard deviation, to determine the intelligence profiles of the respondents. Interpretation of scores followed this scale: 1.00–1.80 (Very Low), 1.81–2.60 (Low), 2.61–3.40 (Moderate), 3.41–4.20 (High), and 4.21–5.00 (Very High). Results were then analyzed in relation to existing literature, both local and international, to highlight similarities, differences, and contextual implications.

Ethical Considerations

The study strictly adhered to ethical research standards of the university, including voluntary participation, informed consent, confidentiality, and data integrity. Identifying information was excluded to preserve anonymity. Data were stored securely and used solely for academic purposes.

Results & Discussion

This section presents the findings of the study on the multiple intelligences of Grade 12 Senior High School students at a private institution in Rizal, Zamboanga del Norte . Data are organized according to the eight domains identified in Gardner's framework—linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic intelligences—measured using McKenzie's (1999) *Multiple Intelligences Survey*. The results are discussed in relation to their descriptive interpretations, followed by a deeper analysis of their implications. To ensure rigor, the findings are compared with relevant empirical studies both in the Philippines and abroad, allowing the study to highlight consistencies, divergences, and contextual insights. Through this process, the discussion not only interprets the numerical data but also situates them within the broader educational discourse on learner diversity, differentiated instruction, and inclusive pedagogy.

Table 1. Mean Scores of Multiple Intelligences among Respondents (n=100)

Intelligence Domain	Mean	Interpretation
Intrapersonal	3.65	High
Interpersonal	3.46	High
Naturalistic	3.37	Moderate
Musical	3.21	Moderate
Bodily-Kinesthetic	3.13	Moderate
Linguistic	3.11	Moderate
Visual-Spatial	3.04	Moderate
Logical-Mathematical	2.71	Moderate

The results of the study revealed that intrapersonal (M = 3.65, High) and interpersonal (M = 3.46, High) intelligences emerged as the most dominant domains among the Grade 12 Senior High School students of Colegio de San Francisco Javier. These findings suggest that students demonstrate strong capacities for self-awareness, reflective thinking, and understanding of others. Intrapersonal intelligence reflects the learners' ability to assess their strengths and weaknesses, regulate emotions, and set personal goals, while interpersonal intelligence reflects their capacity to empathize, collaborate, and communicate effectively in social contexts. On the other hand, logical-mathematical intelligence (M = 2.71, Moderate) registered as the least developed, indicating that while students possess functional analytical and numerical reasoning, these abilities are not as highly expressed compared to personal and relational domains. The other intelligences—naturalistic, musical, bodily-kinesthetic, linguistic, and visual-spatial—fell within the

moderate range, suggesting a generally balanced intelligence profile without extreme deficiencies, but with clear variations in dominance across domains.

The dominance of intrapersonal and interpersonal intelligences among the respondents reflects the strong emphasis of Filipino culture on self-reflection, relational harmony, and community engagement. In the context of senior high school education, these strengths are particularly relevant as learners prepare for future academic or career pathways that require emotional maturity and collaboration. Moderate scores in other intelligences indicate that students possess diverse abilities that may not be fully maximized due to current teaching practices or curricular emphases. The relatively weaker performance in logical-mathematical intelligence suggests a need for enrichment activities that stimulate critical thinking, problem-solving, and numeracy skills. This finding also underscores the importance of differentiated instruction, where educators can design varied learning experiences that nurture students' existing strengths while also supporting less developed domains. In effect, the intelligence profile of the respondents paints a picture of learners who thrive more in reflective and social learning environments than in traditional analytical settings.

These findings are consistent with international and local studies on Multiple Intelligences. Erdem and Keklik (2020) reported that prospective teachers in Turkey displayed stronger intrapersonal and interpersonal intelligences, aligning with the present study's results. Similarly, Berlian, Mujtahid, Vebrianto, and Thahir (2022) found that Indonesian tutors also excelled more in interpersonal and intrapersonal domains than in logical or linguistic ones, supporting the cross-cultural relevance of Gardner's framework. In the Philippine context, Toledo (2023) demonstrated that MI-based differentiated instruction improved student performance in Physics, confirming that tapping into learner strengths fosters engagement and comprehension. Aquino (2024) also noted that certain intelligences, such as interpersonal and intrapersonal, correlated with students' academic behaviors and self-concept. Furthermore, Ziauddin (2024) highlighted the importance of cultural adaptation in MI assessment, as Asian learners tend to score lower in logical-mathematical intelligences compared to Western counterparts. These convergent findings underscore the need for interventions tailored to contextual realities, particularly in Philippine schools where learners may excel more in personal and social intelligences than in analytical domains.

Conclusions

The study concluded that Grade 12 Senior High School students of the private institution in Rizal, Zamboanga del Norte demonstrate diverse intelligence profiles, with intrapersonal and interpersonal intelligences emerging as the most dominant domains, while logical-mathematical intelligence was identified as the least developed. This suggests that learners are more inclined toward reflective self-awareness and social collaboration than numerical or analytical reasoning. The overall moderate scores in other intelligences reflect a balanced but non-specialized profile, underscoring the need for teaching strategies that address multiple learning modalities.

The results validate Gardner's Theory of Multiple Intelligences within the Philippine context, echoing both local and international studies that highlight the strengths of learners in personal and relational intelligences over technical or logical skills (Erdem & Keklik, 2020; Berlian et al., 2022; Toledo, 2023; Aquino, 2024). These findings emphasize the critical role of differentiated instruction in maximizing student engagement and achievement by recognizing and nurturing diverse talents.

Finally, the study contributes to the goals of Sustainable Development Goal 4 (Quality Education) and the Philippine Harmonized National R&D Agenda (HNRDA 2022–2028) by generating empirical evidence that supports inclusive, learner-centered pedagogies. By identifying both strengths and weaknesses in students' intelligence profiles, this research provides practical insights that can inform teacher practice, curriculum design, and institutional policy in pursuit of equitable and holistic education.

Based on the findings and conclusions, the following recommendations are proposed:

1. **For Teachers.** Systematically adopt the differentiated instructional strategies to address the varied intelligence profiles of learners. Given the findings that students demonstrated stronger intrapersonal and interpersonal intelligences, instructional approaches such as collaborative projects, peer mentoring, reflective journaling, and self-assessment should be reinforced. At the same time, logical-mathematical reasoning should be deliberately strengthened through problem-based learning, inquiry-driven activities, gamified tasks, and the use of technology-enhanced simulations. To ensure the effective implementation of these strategies, teachers must be provided with sustained professional development focused on Multiple Intelligences (MI)-based pedagogy, differentiated lesson planning, diversified assessment practices, and the integration of ICT in instruction.

2. **For School Administrators.** Institutionalize MI-based student profiling as part of academic development programs. Such profiling may serve as a basis for class placements, the design of co-curricular activities, remedial interventions, and career guidance services. Administrators are further encouraged to invest in comprehensive teacher training, mentoring systems, and resource provision to enhance instructional innovation and inclusivity. The establishment of professional learning communities and monitoring mechanisms is likewise vital in ensuring the consistent application of differentiated instruction and MI principles across classrooms.

3. **For Policy Makers.** Integrate MI theory and differentiated instruction into curriculum frameworks, teacher education standards, and professional development programs within the Department of Education (DepEd) and the Commission on Higher Education (CHED). Embedding these pedagogical orientations in both pre-service preparation and in-service training will reinforce the inclusivity dimension of the K to 12 program and align with national and global educational commitments, specifically Education for All (EFA) and Sustainable Development Goal 4, which emphasizes equitable and quality education for all

learners.

4. **For Future Researchers.** Further inquiry be undertaken to expand the scope of MI-related studies across various schools, grade levels, and cultural contexts in order to identify patterns of intelligence dominance and their academic implications. Employing correlational, longitudinal, and mixed-methods designs will enable a more robust examination of the relationship between intelligence profiles, academic performance, motivation, and career readiness. Additionally, evaluating the effectiveness of teacher training and differentiated instructional practices will provide empirical evidence regarding their impact on classroom teaching and learner achievement.

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Disclosure: Use of AI Tools

In compliance with Threshold's guidelines for the ethical use of artificial intelligence (AI) and automated tools in academic research, the authors disclose the use of OpenAI's ChatGPT for enhancing the quality and clarity of the manuscript. ChatGPT was utilized to assist in refining the language, structure, and formatting of the text, ensuring a high level of academic rigor and coherence. The authors confirm that all data analysis, critical interpretations, and conclusions presented in this manuscript were conducted independently by the research team. The AI tool was employed strictly for editorial assistance and did not influence the scientific content or ethical considerations of the study. All intellectual contributions from the AI tool are in accordance with the authors' original intentions and have been reviewed and approved by all co-authors. The use of ChatGPT complies with Threshold's ethical standards and guidelines for transparent reporting of AI involvement in research. The authors remain fully responsible for the integrity and accuracy of the content presented in this paper.

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