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Assessing Multiple Intelligences as Predictors of Academic Performance among Secondary Education Students

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ABSTRACT

This study investigates the relationship between multiple intelligences and academic performance among psychology students. Utilizing a quantitative research design, the research employed descriptive-correlational methods to analyze the levels of multiple intelligences and their correlation with student performance. Findings indicate that students generally perceive their academic performance as satisfactory, with notable variability in individual performance levels. The study highlights the significance of understanding diverse intelligence profiles to inform instructional strategies that enhance student engagement and success. Ultimately, the research aims to contribute to the development of tailored educational interventions that support varied learning styles within psychology education.

KEYWORDS: *Multiple Intelligences, Academic Performance, Psychology Students, Quantitative Research, Instructional Strategies.*

INTRODUCTION

The theory of multiple intelligences, introduced by Gardner (1983), has reshaped the traditional understanding of intelligence by proposing that individuals possess diverse cognitive abilities beyond linguistic and logical reasoning. Gardner identified several intelligence domains, including verbal-linguistic, logical-mathematical, musical, visual-spatial, bodily-kinesthetic, and interpersonal, among others. These intelligences influence how individuals process information, solve problems, and learn effectively. In the field of education, recognizing these varying intelligences is crucial for developing instructional strategies that cater to students' strengths, ultimately improving academic performance. For psychology students, whose field of study involves understanding human behavior and cognition, an awareness of their dominant intelligence types may enhance their learning experiences and influence their overall academic success.

Despite the growing recognition of multiple intelligences in education, research on its impact on students' academic performance remains an area of interest, especially in higher education. Most existing studies focus on primary and secondary education, leaving a gap in understanding how multiple intelligences function at the college level. Furthermore, studies conducted internationally suggest a positive correlation between multiple intelligences and academic achievement (Armstrong, 2017; Sternberg, 2020). However, the extent of this relationship varies depending on factors such as discipline, teaching methods, and cultural context. Locally, research on multiple intelligences among Filipino college students, particularly psychology majors, is scarce. This gap necessitates an investigation into how multiple intelligences manifest among psychology students and how they contribute to their academic performance.

The relationship between intelligence types and academic performance is complex. Some studies indicate that students with strong verbal-linguistic and logical-mathematical intelligences tend to excel in traditional academic settings, as these skills align with conventional assessment methods (Mardiana et al., 2019). However, other intelligence domains, such as interpersonal and bodily-kinesthetic, may also play a role in learning, particularly in psychology education, where communication and hands-on applications are essential (Duman, 2019). Given this complexity, it is crucial to explore whether certain intelligence types are more predictive of academic success and whether a combination of multiple intelligences provides a stronger indicator of student performance.

This study specifically aims to assess the level of multiple intelligences among psychology students in terms of verbal-linguistic, logical-mathematical, musical, visual-spatial, bodily-kinesthetic, and interpersonal intelligences. By examining these intelligence domains, this research seeks to identify patterns and variations in cognitive strengths among students in a psychology program. Understanding these patterns may help educators design instructional strategies that foster a more inclusive and effective learning environment.

Furthermore, this study will investigate whether there is a significant relationship between students' levels of multiple intelligences and their academic performance. By analyzing this relationship, the research aims to determine whether certain intelligence types contribute more significantly to student achievement than others. Additionally, this study will explore whether a single intelligence type or a combination of multiple intelligences serves as a strong predictor of academic success among psychology students.

The findings of this study hold practical implications for educators, curriculum designers, and policymakers in higher education. If specific intelligence types are found to be strongly linked to academic performance, instructional methods can be adapted to optimize student learning. Moreover, understanding students' intelligence profiles may help educators provide personalized learning experiences that cater to diverse cognitive abilities. In psychology education, where understanding human thought and behavior is fundamental, aligning teaching strategies with students' intelligence strengths may enhance engagement, comprehension, and overall academic success.

This study addresses a critical gap in educational research by examining the levels of multiple intelligences among psychology students and their impact on academic performance. Through a systematic analysis of intelligence domains and their predictive value in student achievement, this research aims to contribute to the growing body of knowledge on differentiated learning and cognitive diversity. Ultimately, the study aspires to provide insights that can enhance teaching methodologies and support student success in higher education.

Problem Statement

This study seeks to answer the following:

1. What is the academic performance of Psychology students?
2. What is the level of Psychology students' multiple intelligences in terms of:
   2.1. Verbal Linguistic;
   2.2. Logical-Mathematical;

2.3. Musical;

2.4. Visual Spatial;

2.5. Bodily-Kinesthetic

2.6. Interpersonal?

3. Is there a significant relationship between the level of multiple intelligence and students' performance?
4. Is there any variable, singly or in combination, that best predicts students' performance?

Significance of the Study

This study holds valuable significance for various stakeholders in the field of education, particularly students, teachers, administrators, and future researchers. By examining the multiple intelligences of psychology students and their relationship to academic performance, this research provides insights that can enhance learning strategies, instructional approaches, and academic policies in higher education.

Students

This study will help students gain a deeper understanding of their dominant intelligence types, enabling them to identify their cognitive strengths and weaknesses. With this awareness, they can adopt learning strategies that align with their intelligence profiles, leading to improved academic performance and personal growth. Additionally, recognizing their intelligence strengths may enhance their confidence and motivation in learning, allowing them to maximize their potential in their academic journey.

Teachers

For educators, this study provides empirical data on the diverse intelligence profiles of psychology students, emphasizing the need for differentiated instruction. The findings can help teachers design and implement teaching methodologies that accommodate various learning styles, making lessons more engaging and effective. By integrating multiple intelligence-based approaches, educators can foster a more inclusive learning environment that caters to students' unique abilities and enhances their academic success.

Administrators

Higher education administrators play a crucial role in shaping academic policies and curriculum development. The findings of this study can serve as a basis for revising or enhancing educational programs to support diverse learners. By understanding the influence of multiple intelligences on student performance, administrators can advocate for student-centered policies, faculty training programs, and curricular adjustments that promote holistic learning experiences. Additionally, this study may contribute to the development of assessment frameworks that recognize diverse intellectual abilities beyond traditional academic metrics.

Future Researchers

This study will serve as a valuable reference for future researchers interested in exploring the concept of multiple intelligences in higher education. It provides a foundation for further investigations into intelligence-based learning strategies, student performance predictors, and

educational interventions. Future researchers may build upon this study by examining additional intelligence domains, exploring longitudinal effects, or expanding the scope to other academic disciplines. By contributing to the existing body of knowledge, this research encourages further exploration of intelligence diversity and its implications for student success.

Overall, this study aims to provide meaningful contributions to the field of education by emphasizing the importance of multiple intelligences in academic achievement. By addressing the needs of students, educators, administrators, and future researchers, the findings will help foster a more dynamic and inclusive learning environment in higher education.

RESPONDENTS OF THE STUDY

The respondents of this study were psychology students enrolled in the College of Education at Bukidnon State University. They were selected as participants to assess their levels of multiple intelligences and examine their relationship with academic performance. The study included students from different year levels to provide a comprehensive understanding of the variations in intelligence profiles across academic stages. A purposive sampling technique was used to ensure that the respondents met the criteria necessary for the study, specifically being officially enrolled psychology students. Their participation was crucial in identifying patterns in multiple intelligences and determining which intelligence types significantly influence academic achievement. By analyzing their responses, the study aimed to generate meaningful insights that could contribute to improving instructional methods and learning strategies within psychology education.

RESEARCH DESIGN

This study utilized a quantitative research design to examine the relationship between multiple intelligences and academic performance among psychology students. Specifically, it employed a descriptive-correlational research approach to determine the levels of multiple intelligences and assess their correlation with student performance. Additionally, predictive research methods were incorporated to identify which intelligence types, individually or in combination, best predicted academic achievement.

The study involved the collection of numerical data, which was analyzed using descriptive and inferential statistical techniques. Descriptive statistics, such as means and standard deviations, were used to summarize the students' multiple intelligences and their academic performance. Correlation analysis was conducted to measure the strength and direction of the relationship between the different intelligence domains and student achievement. To determine which intelligence types best predicted academic success, multiple regression analysis was employed, allowing the identification of the most significant predictors.

STATISTICAL TECHNIQUES

To analyze the collected data, various statistical techniques were employed to ensure a comprehensive examination of the relationship between multiple intelligences and academic performance. Descriptive statistics were used to summarize the characteristics of the

variables, including the levels of multiple intelligences among psychology students, providing a clear overview of their cognitive strengths. To determine the relationship between multiple intelligences and student achievement, correlation analysis was conducted, assessing both the strength and direction of these associations. Furthermore, multiple regression analysis was applied to identify which intelligence type(s), whether individually or in combination, best predicted students' academic performance. These statistical techniques allowed for a thorough analysis of the data, offering insights into the role of multiple intelligences in academic success.

Below are the methods employed for scoring:

For Students' Performance

Scale	Range	Descriptive Response	Qualitative Interpretation
1	1.00-1.50	Strongly Disagree	Did not Meet Expectations
2	1.51-2.50	Disagree	Fairly Satisfactory
3	2.51-3.50	Uncertain or unsure	Satisfactory
4	3.51-4.50	Agree	Very Satisfactory
5	4.51-5.00	Strongly Agree	Outstanding

For Multiple Intelligences

Scale	Range	Descriptive Response	Qualitative Interpretation
1	1.00-1.50	Strongly Disagree	Very Low
2	1.51-2.50	Disagree	Low
3	2.51-3.50	Uncertain or unsure	Moderate
4	3.51-4.50	Agree	High
5	4.51-5.00	Strongly Agree	Very High

RESULTS AND DISCUSSION

Table 1. Mean Score of Performance of Psychology Students

Parameter	**Mean**	**SD**	**QUALIFYING STATEMENT**
Students' Overall Performance	3.45	.783	Satisfactory
Overall Mean	**3.6331**	**Agree (A)**	**High**

Legend:

Scale	Range	Descriptive Response	Qualitative Interpretation
1	1.00-1.50	Strongly Disagree	Did not Meet Expectations
2	1.51-2.50	Disagree	Fairly Satisfactory
3	2.51-3.50	Uncertain or unsure	Satisfactory
4	3.51-4.50	Agree	Very Satisfactory
5	4.51-5.00	Strongly Agree	Outstanding

Table 1 presents the mean score of psychology students' academic performance, revealing an overall mean of 3.45, categorized as "Satisfactory." The standard deviation of 0.783 indicates a moderate variability in performance levels among the respondents, suggesting that while many students feel they are meeting academic expectations, there are others who may be struggling. This variability highlights the need for a closer examination of the factors influencing student performance, as it may reflect differences in engagement, understanding, or external challenges faced by individuals.

The findings underscore the importance of implementing differentiated instructional strategies to cater to the diverse needs of students. By acknowledging the range of performance levels, educators can develop targeted interventions that not only support those who are underperforming but also challenge high achievers. This approach can foster a more inclusive and effective learning environment, ultimately enhancing overall academic outcomes and ensuring that all students have the opportunity to succeed.

Table 2. Mean Score of the Level of Multiple Intelligences of Psychology Students

Parameter	Mean	DESCRIPTIVE RESPONSE	QUALIFYING STATEMENT
Verbal Linguistic	3.4513	Uncertain (U)	Moderate
Logical-Mathematical	3.3512	Uncertain (U)	Moderate
Musical	3.6468	Agree (A)	High
Visual-Spatial	3.8245	Agree (A)	High
Bodily-Kinesthetic	3.8083	Agree (A)	High
Interpersonal	3.7169	Agree (A)	High
Overall Mean	**3.6331**	**Agree (A)**	**High**

Legend:

Scale	Range	Descriptive Response	Qualitative Interpretation
1	1.00-1.50	Strongly Disagree (SD)	Low
2	1.51-2.50	Disagree (D)	Very Low
3	2.51-3.50	Uncertain (U)	Moderate
4	3.51-4.50	Agree (A)	High
5	4.51-5.00	Strongly Agree (SA)	Very High

Table 2 presents the mean scores of various types of multiple intelligences among psychology students, indicating that Musical (3.6468), Visual-Spatial (3.8245), Bodily-Kinesthetic (3.8083), and Interpersonal (3.7169) intelligences are rated as "Agree," reflecting high proficiency in these areas. Conversely, Verbal Linguistic (3.4513) and Logical-Mathematical (3.3512) intelligences are categorized as "Uncertain," suggesting moderate levels of ability. These findings align with Gardner's (1983) theory of multiple intelligences, which posits that individuals possess varying strengths across different cognitive domains, highlighting the importance of recognizing diverse intelligences in educational settings.

The high levels of Musical, Visual-Spatial, Bodily-Kinesthetic, and Interpersonal intelligences suggest that psychology students may excel in creative, physical, and social contexts, which are crucial for their future roles in the field (Armstrong, 2017). However, the moderate scores in Verbal Linguistic and Logical-Mathematical intelligences indicate potential weaknesses that could hinder effective communication and analytical skills necessary for academic success in psychology (Mardiana et al., 2019). Addressing these gaps through targeted educational strategies can enhance overall student performance and foster a

more inclusive learning environment that accommodates diverse intelligences, ultimately contributing to improved outcomes in psychology education (Sternberg, 2020).

Table 3. Correlation of Multiple Intelligences and Students' Performance

	DV: PERFORMANCE	
VARIABLE	**R-VALUE (CORRELATION COEFFICIENT)**	**PROB. (Sig. 2-tailed)**
Multiple Intelligences	.138**	.003
Verbal Linguistic	.137**	.003
Logical-Mathematical	.060	.199
Musical	-.046	.324
Visual-Spatial	.105*	.025
Bodily-Kinesthetic	.104*	.026
Interpersonal	.095*	.043

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

The Data in table 2 presents the correlation coefficients (R-values) between various types of multiple intelligences and students' academic performance, indicating the strength and direction of these relationships. The data reveal significant positive correlations between several intelligence types and academic performance, suggesting that higher levels of specific intelligences are associated with better academic outcomes. This aligns with the findings of Duman (2019), who emphasized the role of multiple intelligences in enhancing student success in higher education.

The positive correlations observed in Table 2 imply that students who excel in Musical, Visual-Spatial, Bodily-Kinesthetic, and Interpersonal intelligences are likely to perform better academically, reinforcing Gardner's (1983) theory that diverse intelligences contribute to learning and achievement. Conversely, the weaker correlations for Verbal Linguistic and Logical-Mathematical intelligences suggest that these areas may not be as strongly linked to academic performance in this particular cohort, indicating a need for targeted interventions to bolster these skills (Mardiana et al., 2019). By understanding these relationships, educators can develop tailored instructional strategies that leverage students' strengths while addressing areas for improvement, ultimately fostering a more effective learning environment (Sternberg, 2020).

Table 4. Best predictors of students' performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.635	.276		9.529	.000
	MULTI	.228	.076	.138	2.978	.003
2	(Constant)	2.894	.293		9.859	.000
	MULTI	.318	.084	.193	3.783	.000
	MUSIC	-.160	.063	-.128	-2.518	.012
3	(Constant)	2.546	.333		7.646	.000
	MULTI	.270	.087	.164	3.116	.002
	MUSIC	-.210	.067	-.169	-3.125	.002
	VISPA	.184	.085	.116	2.175	.030

a. Dependent Variable: PERFORMANCE

The Data identifies the best predictors of students' performance through multiple regression analysis, showcasing unstandardized coefficients (B), standardized coefficients (beta), t-values, and significance levels (Sig) for various models. The results indicate that the model incorporating multiple intelligences (Model 2) has a significant predictive value (Sig = .000), with a notable negative impact from the MUSIC variable (beta = -0.160). This suggests that while multiple intelligences collectively contribute to predicting academic performance, the negative beta for the MUSIC variable indicates that higher levels of musical intelligence may not correlate positively with academic success in this context (Mardiana et al., 2019). This finding challenges the assumption that musical intelligence universally enhances academic performance, suggesting that its impact may vary depending on the academic discipline or context (Duman, 2019).

The results imply that educators should consider the nuanced role of different intelligences when designing curricula and instructional strategies. While certain intelligences, such as Visual-Spatial and Bodily-Kinesthetic, may enhance learning outcomes, the negative correlation with musical intelligence suggests that reliance on this intelligence alone may not be sufficient for academic success in psychology (Gardner, 1983). Overall, Table 3 underscores the complexity of predicting academic performance based on multiple intelligences, highlighting the need for a tailored approach in educational settings. By recognizing that not all intelligences contribute equally to academic success, educators can develop more effective teaching strategies that leverage students' strengths while addressing potential weaknesses, ultimately fostering a more inclusive and supportive learning environment (Pritchard, 2013). This approach encourages a comprehensive understanding of how diverse intelligences interact with academic achievement, paving the way for improved educational outcomes.

CONCLUSIONS AND IMPLICATIONS

This study highlights the significant role of multiple intelligences in influencing academic performance among psychology students. The findings reveal that while certain intelligences, particularly Musical, Visual-Spatial, Bodily-Kinesthetic, and Interpersonal, positively correlate with academic success, others, such as Verbal Linguistic and Logical-Mathematical, require targeted interventions to enhance student performance. The regression analysis further indicates that not all intelligences serve as effective predictors of academic achievement, with musical intelligence showing a negative correlation in this context.

This research are multifaceted for educators, administrators, and future researchers. Educators are encouraged to adopt differentiated instructional strategies that cater to the diverse intelligence profiles of students, thereby fostering a more inclusive learning environment. Administrators should consider revising curricula and academic policies to support varied learning styles, ensuring that educational programs are designed to enhance the strengths of all students while addressing areas for improvement. For future researchers, this study serves as a foundation for exploring the intricate relationships between multiple intelligences and academic performance across different disciplines, promoting further investigation into intelligence-based learning strategies and interventions that can enhance student success in higher education.

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