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RESEARCH ARTICLE

LEARNING FACTORS, MATHEMATICS SELF-CONCEPT AND ACADEMIC PERFORMANCE AMONG TOURISM MANAGEMENT STUDENTS: A CORRELATIONAL STUDY

Elvis Lesly T. Taño-An, Angelyn M. Aquino, Manuel A. Gaviola, Niño N. Sacapaño, Mary Criss M. Tus, Eugene E. Toring, Kimberly N. Toring, Cherry C. Escarilla, Jhoselle Tus, Jimmy B. Maming

Email: *elvisleslytejada@gmail.com*

Abstract

This study aims to investigate the relationship between academic accomplishment and learning-related characteristics. Specifically, it examines how students' achievements in general mathematics relate to their proficiency in integrated learning settings, self-concept, and various learning variables. Despite participants' exceptional academic achievements in general mathematics, the study found that their proficiency in integrated learning contexts, mathematics self-concept, and other learning-related characteristics was only moderate. This suggests that high performance in traditional academic settings does not necessarily translate to high performance in integrated learning environments. Furthermore, the study's results indicated no statistically significant correlation between academic achievement and learning outcomes, mathematics self-concept, or the examined learning factors. This lack of significant correlation suggests that other factors may be more crucial in influencing students' success in integrated learning settings. The findings highlight the complexity of academic achievement and suggest the need for a more nuanced understanding of how different learning environments and personal characteristics interact to impact students' performance. This study underscores the importance of exploring additional variables contributing to students' success and suggests that educational strategies should consider these diverse factors to support holistic student development.

Keywords: *mathematics self-concept, learning factors, academic performance*

Introduction

Education was one of the many sectors dramatically impacted by the sudden advent of the COVID-19 epidemic. As a result, the education sector was forced to forbid in-person instruction completely. The catastrophic disruptions to global education systems caused by the pandemic have disproportionately impacted the most vulnerable students (UNESCO, 2021).

Based on a study by Sintema (2020), it is plausible that secondary school students' mathematics performance on the national examination may decline if the pandemic remains uncontained promptly, as the early closure of schools would disrupt the academic calendar. A common reason why adolescents cease their pursuit of mathematics is because they perceive its principles to be devoid of practical application (Galindo & Newton, 2017).

One primary challenge in distance education is the comprehension gap arising from the shift from conventional classroom settings to home learning environments.

Amidst the COVID-19 pandemic, technological, individual, institutional, and community obstacles were acknowledged in the realm of distance learning. However, an incomplete analysis has not yet been completed concerning how these issues impacted the mathematics self-perception and learning aspects of college students who were enrolled in a mixed learning environment. In accordance with this premise, the investigators carried out this inquiry in the manner that was described.

Methodology

The study utilized a correlational research design, with 111 college students completing the quantitative portion of the survey. It investigated the connection between mathematics self-concept and integrated learning components in relation to academic accomplishment. McLeod (2018) describes a questionnaire as an instrument of study comprising organized queries to elicit participant responses, similar to written interviews. Data collection was conducted through various means, including in-person, phone, mail, and

online methods. Google Forms were used to streamline the survey administration process. The statistical analyses were developed collaboratively by the research adviser and the statistician. To validate the survey responses, a total of eight individuals—two mathematics instructors and six students—participated in interviews. This comprehensive approach ensured the reliability and accuracy of the data collected, providing a robust basis for examining the relationships between the studied variables.

Result and Discussion

The relationship between one's self-perception of their mathematical abilities and their level of scholastic accomplishment. Statistically, there is no correlation between academic performance and mathematics self-concept for the following dimensions: organization, dynamics, and overall mathematics self-concept. This conclusion can be drawn from the analysis findings, which were carried out at a significance level of 0.05. As seen in the table, empirical evidence supports the hypothesis that there is a moderately negative association between mathematical self-concept and academic achievement across various areas, such as learning, organization, and dynamics.

Variables	*r-value*	*p-value*	*Decision*
Mathematics Self-Concept in terms of Learning and Academic Performance	-0.03	0.51	Do Not Reject Ho
Mathematics Self-Concept in terms of Organization and Academic Performance	-0.08	0.60	
Mathematics Self-Concept in terms of Dynamics and Academic Performance	-0.04	0.31	
Mathematics Self-Concept and Academic Performance	-0.08	0.38	

The relationship between one's self-perception of their mathematical abilities and their level of scholastic accomplishment. Statistically speaking, there is no correlation between academic performance and mathematics self-concept for the following dimensions: organization, dynamics, and overall mathematics self-concept. This conclusion can be drawn from the analysis findings, which were carried out at a significance level of 0.05. As seen in the table, empirical evidence supports the hypothesis that there is a moderately negative association between mathematical self-concept and academic achievement across various areas, such as learning, organization, and dynamics.

Variables	*r-value*	*p-value*	*Decision*
Learning Factors in terms of Accessibility and Academic Performance	-0.02	0.51	Do Not Reject Ho
Learning Factors in terms of Personal Space and Academic Performance	0.03	0.85	
Learning Factors in terms of Learning Autonomy and Academic Performance	0.08	0.60	
Learning Factors and Academic Performance	0.09	0.63	

Moreover, according to the findings of the statistical study, there is no significant correlation between academic performance and learning autonomy, accessibility, or personal space. As a result of the data shown in the table, it is possible to conclude that learning-related characteristics, such as learning autonomy, personal space, and accessibility, do not significantly impact the participants' academic accomplishment. This is demonstrated by the fact that there is a slight positive correlation between the two variables.

Conclusion

Despite some students being proficient in mathematics before the COVID-19 pandemic, they struggled with remote learning due to distractions at home. They found it challenging to comply with instructions and understand mathematical concepts. Frequent interruptions and connectivity issues in a mixed-learning environment further hindered their progress. Students relied heavily on external resources, such as mobile apps, the internet, parents, and tutors, which negatively impacted their academic self-perception and progress in mathematics. The study found a weak correlation between self-perception and learning factors and no significant link between integrated learning components and overall academic achievement in mathematics. Qualitative testimonies highlighted the importance of the internet, parents, and peers in students' academic success. Recommendations include designing interventions to improve motivation and engagement, fostering a supportive learning environment, and incorporating diagnostic evaluations. Educators should prioritize interventions' effects on students' attitudes and utilize technology effectively, while parents should ensure a conducive learning environment and monitor progress. Further research is needed on the relationship between learning elements, self-concept, and academic achievement in traditional classroom settings.

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Affiliations and Corresponding Information

Prof. Elvis Lesly T. Taño-An
Malay College – Philippines

Prof. Angelyn M. Aquino
Malay College – Philippines

Prof. Manuel A. Gaviola
Aklan State University – Ibajay Campus

Niño N. Sacapaño
Malay College – Philippines

Prof. Mary Criss M. Tus
Philippine Christian University – Philippines

Dr. Eugene E. Toring
Indiana Aerospace University - Philippines
Nuevo School of Technology and Humanities, Inc. – Philippines

Dr. Kimberly N. Toring
University of the Visayas – Philippines
Nuevo School of Technology and Humanities, Inc. – Philippines

Dr. Cherry C. Escarilla
Malay College – Philippines

Dr. Jhoselle Tus
Malay College – Philippines
St. Dominic College of Asia – Philippines

Dr. Jimmy B. Maming
Malay College – Philippines