

Mental Ability Test as Predictor of Academic Performance of Senior High School Students of a Maritime School

Loraine D. Laurezo¹ and Celso I. Magallanes²

¹VMA Global College and Training Center, Inc., Bacolod City, Philippines

²University of Negros Occidental-Recoletos, Bacolod City, Philippines

Article history

Submitted: 22 October 2020

Revised: 4 November 2020

Accepted: 12 November 2020

Keywords

Guidance and Counseling
Mental Ability
Academic Performance
Senior High School Students
Maritime School
Descriptive-Correlational
Bacolod City

Introduction. The academic performance of the students is where the education system revolves. Moreover, academic performance is the knowledge gained by the students throughout the learning process. In the Philippines, the integration of the K-12 program requires the institutions to implement the Outcome-Based Education (OBE) model of education, which requires the students to demonstrate what they have learned. With this, mental ability tests play a role in determining every student's abilities and potential in the learning process. Hence, the paper describes the students' mental ability and academic performance during the school year 2019-2020. Likewise, it explores the relationship between mental ability and academic performance and the students' performance in English and Mathematics. Also, it determines whether mental ability can predict the academic performance of students.

Methods. A descriptive design was used to describe the students' mental ability test and academic performance during the School Year 2019-2020. Meanwhile, a correlational design was utilized to determine whether a relationship exists between the students' mental ability and academic performance in the four areas of the test: verbal comprehension, verbal reasoning, figural reasoning, and quantitative reasoning. The predictive approach was used to determine whether the mental ability test results can predict academic performance. Stratified random sampling was utilized, and 212 students were chosen as respondents of the study. The data were taken from the database prepared by the psychometrician and from the system of the school. Mean, Standard Deviation, Pearson Product Moment, and Linear Regression were used to analyze the data.

Results. The study's findings revealed that the students' academic performance is high based on their GPA and their grades in English and Mathematics. Likewise, they got an average level in their mental ability and the areas of figural and quantitative reasoning. However, they got a below-average level in their verbal comprehension and verbal reasoning. Furthermore, the result of the study revealed that there is a significant relationship existing between students' mental ability and their academic performance in English. Moreover, there is a significant relationship between students' mental ability and their academic performance in Mathematics. Also, a significant relationship exists between mental ability and students' academic performance based on their GPA. Furthermore, a significant relationship was found between verbal comprehension and academic performance of the students. Also, a significant relationship exists between verbal reasoning and their academic performance. Moreover, the findings revealed that there is a significant relationship between figural reasoning and academic performance. Also, a significant relationship was found between quantitative reasoning and students' academic performance. Finally, the findings revealed that mental ability could predict the academic performance of senior high school students.

Conclusion. Mental ability and academic performance are correlated. As part of the admission process, mental ability tests can be a factor in predicting students' academic performance. It was implied that the role of the mental ability test in the assessment of students' ability is essential as it gives an overview of the different types of learners. With the implementation of Outcome-Based Education (OBE), students are trained to develop or maximize their skills to perform different tasks. In this context, coordination among the members of the academic community is necessary for creating programs and activities that will enhance the students' skills and abilities. Thus, the use of mental

ability tests will aid the teachers and the Guidance office in creating strategies and programs that will develop students' potentialities.

Practical Value of the Paper. The study contributes to the few existing literature on mental ability tests as a predictor of senior high school students' academic performance. Likewise, the research findings provide baseline information for policy recommendations, which can help improve and develop various activities and programs that can benefit both the students and the school.

References

- Atienza, A. A., Linatoc, E. M., Mapalad, A. B., & Sevilla, M. C. (2017). Correlation of Academic Performance and Problems Encountered by Marine Transportation Students. *Asia Pacific Journal of Maritime Education*, 3(1), 25-30.
- Cadao-esperal, D. L. (2016). Correlates of Academic Performance of College of Arts and Sciences Students: Basis for Intervention. *Tilamsik*, 8(2). Retrieved from <https://ejournals.ph/article.php?id=9985>
- Dzulkifli, M. A., & Alias, I. (2012). Students of low academic achievement—their personality, mental abilities and academic performance: How counsellor can help. *International Journal of Humanities and Social Science*, 2(23), 220-225.
- Ensoy, C. P. & Lavega, M. L. (2015). High School General Point Average (GPA) as Basis for Students' Academic Performance in College. *JPAIR Institutional Research Journal*, 5(1). Retrieved from <https://ejournals.ph/article.php?id=12125>
- Fabito, B. S., Rodriguez, R. L., & Catacutan-Bangit, A. E. Correlation between Student Entrance Exam Results and Academic Performance: Case of a College in a Philippine University.
- Jordan, C. E., Dela Cruz, C. V., & Abraham, A. B. (2017). Students' Aptitude-scaled Ability Scores as Predictors for Assessment for College Potential Achievement Test. *Harvest*, 13(1). Retrieved from <https://ejournals.ph/article.php?id=12976>
- Lowrie, T., Logan, T., Harris, D. (2018) The impact of an intervention program on students' spatial reasoning: student engagement through mathematics-enhanced learning activities. *Cogn. Research* 3, 50, 2018. <https://doi.org/10.1186/s41235-018-0147-y>
- MEDALLON, M. C., & Cataquis, R. E. (2011). Predictive Validity of the Otis-Lennon School Ability Test (OLSAT) to the First Semester Performance of Incoming Students at Lyceum of the Philippines–Laguna. *Lyceum of the Philippines–Laguna Research Journal*, 1(1), 1-1.
- Montalbo, A. F., Evangelista, Y. P., & Bernal, M. M. (2018). Admission Test as Predictor of Student Performance in Political Science and Psychology Students of Rizal Technological University. *Asia Pacific Journal of Multidisciplinary Research*, 6(3).
- Simbulas, L. C. (2014). Self-Efficacy and Academic Performance in Algebra among First-Year Private Non-Sectarian High School Students. *JPAIR Multidisciplinary Research Journal*, 17(1). Retrieved from <https://ejournals.ph/article.php?id=12383>

Correspondence:

Loraine D. Laurezo [laurezo.loraine@gmail.com]
<https://orcid.org/0000-0002-0056-3757>