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University entrance performance versus academic achievements

Nguyen Tien Dung[1], Nguyen Thi Quynh Hoa[2], Bui Viet Toan[3], Tran Minh Tuan[4], Nguyen Vu Thu Ha[5]
[1,2,3,4,5] *Hanoi University, Vietnam*

ABSTRACT: *As universities strive for academic excellence, research on the relationship between university admission criteria and students' academic performance during their higher education studies proves to be valuable. This study investigates the correlation between students' university entrance results and their academic achivements at Hanoi University. The findings showed a moderate and positive correlation between the students' high school graduation exam scores and their cumulative university GPA. There was evidence that the high school graduation exam scores can serve as a useful predictor of academic performance. Still, other factors should be further researched for a complete picture of students' academic success since the university entrance performance only partly explains the students' success.*

KEY WORDS: *Academic achievement, Grade Point Average (GPA), High school graduation score, University entrance performance*

I. INTRODUCTION

Ensuring educational quality begins with the strategic selection of qualified candidates, a critical challenge for universities worldwide. Many studies, both internationally and domestically, have demonstrated the significant value of selecting and applying appropriate university admission criteria in relation to students' academic performance during their higher education studies. Academic achievement can be considered one of the key indicators reflecting students' learning and research abilities. It also serves as an important measure of students' course learning outcome - an indicator of education quality of the future human resources contributing to the nation's socio-economic development. As institutions strive for academic excellence and high student retention rates, the reliance on standardized entrance examinations as a primary gatekeeper has intensified. In many educational systems, particularly in Southeast Asia and Europe, these high-stakes assessments are viewed as the most objective predictors of a student's future success, but their predictive validity remains a subject of ongoing debate. A number of studies have reveal that discrepancies often emerge where "high-scoring" students struggle with the transition to autonomous university life, while those with modest entrance scores demonstrate significant academic growth. Consequently, there is an urgent need to examine the extent to which university entry requirements correlate with - and influence - longitudinal academic performance.

This study addresses this need by analyzing and evaluating the correlation between students' university entrance results and their academic performance at Hanoi University. Through the analysis of three cohorts of undergraduate students admitted from 2019 to 2021, the research aspires to provide empirical evidence to guide the adjustment of admission policies and enhance the quality of training within the framework of institutional autonomy in higher education.

This study holds both theoretical and practical significance. From a theoretical perspective, it expands the existing body of literature on the relationship between university entrance performance and academic achievements in higher education. From a practical perspective, the findings offer actionable insights for university administrators and educators in revising admission policies for improved students' learning outcome. By identifying the university entrance requirements as effective predictors of acadmeic success, the results can inform data-driven decisions regarding student selection procedure and academic support. Ultimately, the study supports efforts to enhance educational quality and to develop a more competent and competitive workforce aligned with national socio-economic development goals.

II. LITERATURE REVIEW

2.1 Previous Studies

Numerous studies have examined the extent to which university admission criteria can predict students' subsequent academic performance; however, the evidence base is nuanced with certain limitations in both the kinds of predictors examined and the contexts in which they have been validated.

Alipio (2021) in his study with college freshmen from higher education institutions in the Philippines moved beyond traditional cognitive indicators and highlighted the relationships among psychological factors, expectancy-value beliefs, and academic performance; accordingly helpseeking, self-esteem, self-efficacy, and social support were found to positively affect expectancy-value beliefs and academic outcomes while the influences of academic overload and perceived stress were negative. This study was significant in demonstrating that non-cognitive variables contribute meaningfully to academic success of students. Yet its reliance on a single national context and self-reported measures raises questions about the generalizability and potential bias of the findings. Moreover, although Alipio's model underscored the importance of psychological factors, it did address how these should be integrated into formal admission criteria, which remain anchored in prior academic records and standardized tests.

In contrast, Roşeanu and Drugaş (2011) provided an overview of various global university admission practices and identified high school academic results**,** and aptitude or standardized test results as the main effective indicators for predicting students' learning capacity at the university level while high school graduation exams or university entrance examinations have limited predictive validity, as these assessments fail to fully capture the students' overall competencies and potential. These findings point to a deeper issue in the literature: although traditional academic indicators are consistently used and moderately predictive, they cannot show a complete picture of student potential, and the criteria themselves may be misaligned with the multifaceted demands of higher education.

More fine-grained analyses further complicate the picture. Specifically, Fletcher, Halpin, and Halpin (1999) found that the ranking of the high school attended and high academic achievement in secondary education were among the most reliable predictors of university success. Similarly, Hoffman and Lowitzki (2005), analyzing data from 522 students at a public university in the southwestern United States, concluded that high school academic performance was a more powerful indicator of college success than standardized test scores. Based on their findings, the authors suggested a more cautious use of standardized tests for the purpose of university admissions. These studies underscored a consistent pattern: measures of sustained academic performance over time tend to predict university outcomes more robustly than one-off, high-stake tests. Still, these findings raised equity concerns, as high school quality and ranking are often associated with socioeconomic status, and both studies are based in specific national and institutional settings that may not be applied to other systems.

Luo, Bland, Stiffler and Will (2020) shifted the focus from pre-admission indicators to early academic integration as a predictor of first-year retention for the purpose of understanding the specific probability impact

and predictability of academic participation and performance. Applying statistical models to analyze data of 738 full-time freshmen, the research showed that students' first-year retention was significantly correlated with a composite indicator of their academic success, including academic participation (credit hours completed) and academic performance (cumulative GPA). This reflects both academic quantity and quality and suggests that students' engagement after entering university may be at least as critical as the characteristics they present at admission. The study strengthens the case for monitoring academic integration to identify at-risk students but it also highlights a limitation of the admission-criteria literature: many predictive models ignore dynamic, post-enrollment factors of students despite their posible mediating or moderating the effects of initial selection criteria.

Vergara and Balquedra (2024), using a descriptive-correlational research design with data collected from 212 freshman university students enrolled in a mathematics class, investigated the aspects of academic success inventory as predictors of their academic achievement. The research findings revealed that career decidedness, concentration, and socializing as academic success factors significantly predicted the students' academic achievement.

In the Vietnamese higher education context, several empirical studies have examined the determinants of students' academic performance, focusing on both internal and external factors influencing learning outcomes.

Vo and Dang (2017) analyzed data collected from 325 students at the University of Information Technology, Vietnam National University to identify 07 factors affecting the student's academic performance with the descending degree of influence learning preferences, study-supported facilities, social pressure, peer pressure, intellectual ability, scholarships and motivation from parents, resulting in different academic results despite similar entrance exam scores.

A subsequent study by Pham, Dao, Doan and Tran (2019), through a large-scale survey of nearly 1,500 students at Foreign Trade University (cohort 2011–2015), reported a significant relationship between family background, admission criteria, and university outcomes. Students from rural or farming families faced more challenges that hindered their performance, whereas higher entrance scores, stronger high school records, and better English proficiency were positively associated with academic success.

Similarly, Nguyen, Hoang, Nguyen and Phan (2020) employed multiple linear regression on secondary data to estimate the impact of various predictors on students' grades at the University of Economics, Hue University. The results revealed that academic performance was influenced by entrance exam scores, gender, academic faculty, cohort, and place of residence. Higher entrance scores were associated with better university performance; female students outperformed male students; and students residing in Hue City tended to achieve lower results than those from outside the city.

Recent research has expanded the scope of inquiry to assess the effectiveness of different admission pathways under the policy of institutional autonomy. Nguyen, Nguyen and Nguyen (2024) analyzed admission and first-year academic data from 1,659 students at the University of Languages and International Studies, Vietnam National University, Hanoi, during the 2022–2023 academic year. Their findings provided empirical evidence for revising admission policies in alignment with universities' growing independence in recruitment.

At the institutional level, case studies have explored discipline-specific variations. For instance, Nguyen, Nguyen and Le (2025) investigated the relationship between first-year academic performance of the 2023 cohort at Dong Thap University and admission variables such as selection method, subject combination, 12th-grade academic classification, and total admission score. Statistical analyses (t-test, ANOVA, and linear regression using R) showed significant differences by subject combination and high school classification but not

by admission method. The authors noted that since the study covered only first-year results, its generalizability to entire undergraduate programs remains limited.

Taken together, these studies indicate that although traditional academic indicators (such as high school grades and institutional prestige) have demonstrable predictive value, the predictive power of these factors varies across contexts and programs, failing to fully capture the complex combination of psychological, contextual, and behavioral factors that shape academic success. Most studies have focused on first-year cohorts and single institutions, suggesting a need for longitudinal, multi-cohort research to better capture how admission criteria, learning environments, and student characteristics interact to shape long-term academic outcomes. The over-reliance on cognitive and performance-based measures in admission decisions appears increasingly at odds with evidence emphasizing the roles of non-cognitive variables and academic integration processes.

2.2 Conceptual Framework

Drawing upon previous empirical studies (Fletcher, Halpin & Halpin, 1999; Hoffman & Lowitzki, 2005; Roşeanu & Drugaş, 2011), this study adopts a conceptual framework that views university admission criteria as potential predictors of students' academic performance. The framework assumes that students' prior academic achievements and admission pathways play a decisive role in shaping their learning outcomes at the tertiary level, while acknowledging the moderating effects of contextual and individual factors. In addition, the framework recognizes that external and institutional conditions - such as the learning environment, academic support systems, and policy context under university autonomy -may mediate or moderate the relationship between admission criteria and students' academic success.

By applying this conceptual framework, the study aims to empirically test the strength and direction of correlations between students' entry results and their subsequent academic performance at Hanoi University. The results are expected to provide evidence-based insights that can inform admission strategies and institutional policies aimed at enhancing training quality under the autonomy regime.

III. RESEARCH METHOD

3.1 Research Design

This study adopts a quantitative research design to examine the correlation between students' university entrance results and their academic performance at Hanoi University expressed through their graduation outcomes. The research employs a descriptive-correlational approach, which allows for the identification and measurement of relationships among variables without manipulating any of them. The purpose is to determine whether and to what extent students' entrance performance predicts their academic achievement during their undergraduate studies.

3.2 Research Population

The research population includes 5,479 undergraduate students who were enrolled at Hanoi University between 2019 and 2021, and graduated in 2023, 2024 and 2025. They were students from different majors who were admitted through the admission method assesing their national high school exam results.

3.3 Data Collection

Data were collected from two main sources:

Admission Data including high school graduation exam scores.

Academic Performance Data comprising cumulative grade point average (GPA) of the whole course.

All data were obtained from the official student database of Hanoi University, with necessary permissions from the university's Academic Affairs Department. Personal identifiers were removed to ensure confidentiality and compliance with research ethics.

3.4 Data Analysis Methods

Quantitative data were analyzed using descriptive statistics to summarize the characteristics of the dataset. To examine the relationship between admission variables and academic outcomes, Pearson correlation and linear regression analysis were employed. These statistical techniques help identify the strength and direction of relationships between entrance scores and university performance indicators. The analyses were conducted using SPSS and Microsoft Excel, allowing for accurate computation, visualization, and interpretation of results.

The interpretation of the Pearson correlation coefficient (r) is as follows:

Table 1: Interpretation of the Pearson correlation coefficient (r)

Pearson correlation coefficient (r) value	Strength	Direction
Greater than 0.50	Strong	Positive
Between 0.30 and 0.50	Moderate	Positive
Between 0.00 and 0.30	Weak	Positive
0.00	None	None
Between 0.00 and -0.30	Weak	Negative
Between -0.30 and -0.50	Moderate	Negative
Less than -0.50	Strong	Negative

(Source: Turney, S., 2024)

3.5 Research Procedures

In the first stage, raw admission and academic data from 2020-2025 were compiled and cleaned prior to the coding of variables and preparation of the dataset for statistical analysis. Next, descriptive and correlational analyses were coded and findings were intepreted to determine key predictive factors of academic success. Finally, recommendations were proposed for improving admission policies and training quality in the context of institutional autonomy.

3.6 Ethical Considerations

The study adheres to ethical standards in educational research. All data were used strictly for academic purposes, and the confidentiality of student information was maintained throughout the research process. No personally identifiable information was disclosed or analyzed.

IV. FINDINGS AND DISCUSSION

The research population of 5,479 undergraduates was grouped into students who were enrolled at Hanoi University in 2019, 2020 and 2021, and graduated in 2023, 2024 and 2025 according to their different majors.

The correlation between the high school graduation exam scores and the cumulative GPA of the whole course of the research population is as follows:

Table 2: Data of the research population

Pearson correlation coefficient (r) value	Strength	Direction	Squared value
0.49	Moderate	Positive	0.24

As can be seen from Table 2 above, the correlation value of 0.49 (r = 0.49) indicates a moderate positive relationship between the high school graduation exam scores and the cumulative GPA of the whole course of 5,479 undergraduates.

Since the value is positive, the variables move in the same direction, which means generally as the students' exam scores increase, their cumulative GPA also tends to be higher and conversely, students with lower exam scores tend to have lower GPAs.

The value of 0.49 shows a moderate strength so it is strong enough to suggest that the high school graduation exam scores are a useful predictor of the GPA of the whole university course. However, there might be cases when many students might have high GPAs but average exam scores, perhaps due to consistent hard work versus test anxiety, or vice versa.

The squared value of the correlation value, which is 0.24, can help us to understand how much the correlation value explains the cumulative GPA of the whole course; accordingly roughly 24% of the variation in the cumulative GPAs can be explained by the graduation exam scores while the remaining 76% might be influenced by other factors, such as study habits, class participation, attendance, and the difficulty of the curriculum.

Regarding the majors of the students in question, the correlation between the high school graduation exam scores and the cumulative GPA of the whole course is as follows:

Table 3: Student data of different majors

Major	The value of *r*	Strength	Direction	Squared value
Communication	0.42	Moderate	Positive	0.18
Tourism	0.36	Moderate	Positive	0.13
Business and Management	0.45	Moderate	Positive	0.20
Languages	0.50	Moderate	Positive	0.25
Social Sciences and Behaviours	0.45	Moderate	Positive	0.20
Information Technology	0.44	Moderate	Positive	0.19

Table 3 shows a moderate positive relationship with moderate strength between the high school graduation exam scores and the cumulative GPA of the whole course of students being classified according to their majors. It means that in general as the students' exam scores increase, their cumulative GPA also tends to be higher and conversely, students with lower exam scores tend to have lower GPAs, and that the high school graduation exam scores are a useful predictor of the GPA of the whole university course. These findings are aligned with what is found with the whole research population as discussed above.

However, there are certain differences across the majors with the *Languages* ranking the hihgest followed by the *Business and Management* and the *Social Sciences and Behaviours*. The lowest rankings belong to the three majors of *Information Technology*, *Communication* and *Tourism*.

The squared values of the correlation values across the majors, ranging from 0.13 to 0.25, also show that the graduation exam scores partly explain the variation in the cumulative GPAs, highlighting the magnitude of the influences of other factors, such as study habits, class participation, attendance, and the difficulty of the curriculum.

To sum up, despite slight differences across majors, the findings show a consistence in terms of the correlation between the high school graduation exam scores and the cumulative GPA of the whole course of the students being the research objectives, i.e. threre is a moderate and positive relationship between the high school graduation exam scores and the cumulative GPA, and the high school graduation exam scores can serve as a useful predictor of the university GPA.

V. CONCLUSION

In conclusion, this study confirms that there is a moderate and positive relationship between the high school graduation exam scores and the cumulative GPA of the university course, and that universities in Vietnam can use the high school graduation exam scores as a university entrance selection criteria thanks to their being a useful predictor of the university GPA.

These findings can have several educational implications. Since the graduation exam scores can partly explain the variation in the cumulative GPAs of the university courses, other factors should be taken into consideration if a complete picture of the relationship between social, psychological, cognitive factors and the like, a part from the general admission criteria, and academic success of the students, which leaves room for further research. Universities should also diversify their student selection criteria along with various academic supports so as to help their students accomplish their study with success.

REFERENCES

[1] Alipio, M.(2021). Predicting Academic Performance of College Freshmen in the Philippines using Psychological Variables and Expectancy-Value Beliefs to Outcomes-Based Education: A Path Analysis. *IMCC Journal of Science*, 1 (Special), 77-86.

[2] Fletcher, J.T., Halpin, G., & Halpin, G. (1999). High School and College Grades: Is Past Performance a Predictor of Future Performance?. *ERIC Institute of Education Sciences*. Retrieved from http://www.eric.ed.gov/?id=ED436577

[3] Hoffman, J. L., & Lowitzki, K. E. (2005). Predicting college success with high school grades and test scores: Limitations for minority students. *The Review of Higher Education, 28*(4), 455-474.

[4] Luo, M.N., Bland, P., Stiffler, D., & Will, J. (2020). Investigating the Predictability of Academic Participation and Performance on First-Year Retention of College Freshmen. *Universal Journal of Educational Research*, 8(5): 2143-2149. http: doi.org/10.13189/ujer.2020.080553

[5] Nguyen, M. H., Hoang, T. K. T., Nguyen, T. T. & Phan, T. B. H. (2020). Factors affecting academic achievement of full-time students at the University of Economics, Hue University. *Hue University Journal of Science: Social Sciences and Humanities*, 129(6C), 137-150.

[6] Nguyen, T. L., Nguyen, V. H. & Nguyen, T. T. (2024). Comparing the effectiveness of university admission methods via frechmen's academic performance. *VNU Journal of Foreign Studies*, 40(05), 106-123.

[7] Nguyen, V. C., Nguyen, Q. T. & Le, T. B. V. (2025). The relationship between admission criteria and first-year academic results: A case study at Dong Thap University. *Journal of Science and Technology - Thai Nguyen University*, 230(04), 433- 442.

[8] Pham, T. H., Dao, N. T., Doan, Q. H. & Tran, D. L. (2019). Family Background and Admission Criteria as the Predictors of University GPA: Evidence from a University in Vietnam. *Journal of Institutional Research South East Asia*, 17(01), 190-204.

[9] Roşeanu, G., & Drugaş, M. (2011). The admission criteria to the university as predictors for academic performance: A pilot study. *Journal of Psychological and Educational Research (JPER), (19*/2), 7-19.

[10] Turney, S. (2024, February 10). *Pearson Correlation Coefficient (r) | Guide & Examples.* Scribbr. Retrieved March 12, 2026, from https://www.scribbr.com/statistics/pearson-correlation-coefficient/

[11] Vergara, C.R. & Balquedra, A.B. (2024). Academic Success and Achievement of Freshmen University Students in Mathematics. *Open Access Library Journal*, 11: e11859. https://doi.org/10.4236/oalib.1111859.

[12] Vo, V. V. & Dang, T. T. P. (2017). Basic Factors Influencing the Academic Performance of Students. *Journal of Science – Hanoi National University,* 33(3), 27-34.