



The Honor Paradox: Rethinking Academic Distinction and Mathematical Ability in Senior High School Graduates

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Abstract

Despite being awarded academic honors, many Filipino students continue to underperform in mathematics—a disconnect highlighted by recent PISA results. This mixed-method case study interrogates the credibility of honor-based distinctions as indicators of actual mathematical competence. Focusing on 40 first-year mathematics education students at a state university, the study correlated senior high school honors with mathematics diagnostic test performance and investigated underlying factors through a validated survey. Of the 40 participants, 37 held academic honors, yet only 2 passed the test. Fisher's Exact Test ($\alpha = 0.05$) revealed no statistically significant relationship between honors and performance. Exploratory factor analysis uncovered three latent dimensions contributing to this discrepancy: (1) educational value and personal growth, (2) mathematical engagement and self-efficacy, and (3) resource availability and teacher support. These findings challenge the assumption that academic honors are reliable proxies for competence. They call into question the meritocratic logic underpinning institutional reward systems, urging a critical reassessment of how educational success is defined, measured, and recognized.

Keywords: *Academic evaluation, honor graduates, mathematical competence.*

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INTRODUCTION

A recent viral Facebook post by a public school teacher in the Philippines shed light on a concerning issue: an honor student struggled to compose a simple paragraph as part of their qualifying examination for the Bachelor of Science in Hospitality Management (BSHM) at Advanced Central College (ACC) in San Jose, Antique. According to an ACC official, despite the student's excellent grades, they exhibited weak foundational English skills, including sentence structure, reading speed, and comprehension. When the student was denied admission, their mother expressed frustration and even called the registrar to complain. This incident, though seemingly isolated, underscores a broader issue in the Philippine education system, where grades and academic honors are often prioritized over actual learning and competency.

The controversy gained further attention in an article by Ecoloma (2024), which highlighted public concerns about the increasing ease with which students receive academic honors and awards. Critics argue that many students graduate with high distinctions without demonstrating deep mastery of their subjects, as evidenced by the Philippines' consistently poor performance in international assessments such as the Programme for International Student Assessment (PISA). Others, however, contend that the growing number of honor students

reflects a more inclusive and supportive educational environment. Still, the growing disconnects between recognition and demonstrated skill challenges long-held assumptions about academic meritocracy.

The phenomenon of "grade inflation" has also raised concerns among education experts. A professor from the University of the Philippines (UP) Diliman likened it to economic inflation, where the increasing number of students graduating with Latin honors—*cum laude*, *magna cum laude*, and *summa cum laude*—diminishes the distinction of academic excellence (David, 2022). In 2022, 1,433 students at UP Diliman graduated with honors, representing 38% of the 3,796 total graduates (David, 2022). While this might suggest improved academic performance, it also raises questions about whether these distinctions still reflect true competency and preparedness for higher education and the workforce. This calls into question the effectiveness of current evaluation systems and how institutions define and reward excellence.

Beyond the issue of grade inflation, the country's performance in global assessments further highlights the disparity between academic recognition and actual skills. The Congressional Policy and Budget Research Department (CPBRD) reported that evaluating the Philippine education system remains challenging due to persistent issues in quality and learning outcomes. In the 2018 PISA, the Philippines ranked last out of 78 countries, and in 2022, it ranked 77th out of 81. Filipino students scored significantly lower than their Southeast Asian peers, with Singapore leading the rankings (Bernardo et al., 2022). The 2018 results showed that fewer than 20% of Filipino students achieved the minimum proficiency level in mathematics, while over 50% demonstrated very low proficiency, indicating a severe gap in fundamental mathematical skills (Department of Education, 2019). These outcomes raise critical concerns about the disconnect between institutional accolades and actual student preparedness in core academic competencies.

In response to these alarming results, Republic Act (RA) 11899 was enacted in 2022, establishing the Second Congressional Commission on Education (EDCOM II). This commission aims to assess the Philippine education sector, identify areas for reform, and propose strategies to enhance global competitiveness. According to the World Bank (2022), the Philippines has one of the highest rates of learning poverty in Asia, with 90.9% of 10-year-olds unable to read or comprehend age-appropriate texts. These findings reinforce concerns that academic recognition in the country may not accurately reflect actual learning and skill development, prompting a critical reevaluation of how achievement is defined within institutional culture.

At a deeper level, this study views academic honors not merely as indicators of achievement but as forms of symbolic capital—a concept introduced by Pierre Bourdieu to describe the prestige, recognition, and institutional legitimacy conferred by honors, credentials, and awards. In this light, distinctions such as honor medals or Latin awards do not simply reward knowledge; they serve as social markers that uphold institutional reputation and reinforce educational hierarchies. However, symbolic capital is often detached from actual competence, particularly when institutional validation is prioritized over authentic mastery. Similarly, Bowles and Gintis's (1976) critique of schooling as a system of social reproduction provides further insight. Their framework suggests that schools function to replicate existing inequalities by rewarding behaviors and performances aligned with institutional norms—such as compliance and test-taking ability—rather than promoting critical understanding or real-world readiness. From this perspective, the proliferation of honor distinctions may reflect the performative logic of educational institutions, producing the appearance of merit and achievement while masking deeper structural deficiencies.

Given these pressing issues—grade inflation, competency gaps, and poor international assessment results—this study sought to investigate the disconnect between academic recognition and mathematical competence among senior high school honor graduates. By examining this issue through both empirical data and critical theoretical lenses, the study contributes to ongoing debates on institutional legitimacy, merit-based reward systems, and educational equity in the Philippine context.

METHOD

This case study used a mixed-method approach that combined qualitative and quantitative methods of research with descriptive-correlational design to explore the gap between academic recognition and mathematical competence in senior high school honor graduates. Specifically, the qualitative research method and the descriptive design were used to identify the total number of senior high school honor graduates, identify the total number of students who passed the researchers-made test in Mathematics, and to analyze potential factors contributing to the observed disparity in the number of senior high school honor graduates and their performance on the researcher-made test in Mathematics. Meanwhile, the quantitative method and correlational design were used to examine whether there was a significant association between the number of senior high

school honor graduates and the total number of passers in the researchers-made test. Although the qualitative component was largely drawn from the structured Likert-scale questionnaire, qualitative insights were still obtained by examining patterns and clusters in students' responses, which provided meaningful interpretations of attitudes, perceptions, and contextual factors affecting their mathematical performance.

To attain the objectives of the study, the following three significant phases were undertaken. Phase I included the pilot testing and validation process. The study involved two primary instruments: (1) researchers-made test, which consists an initial 60-item multiple-choice questions focused on high school basic mathematics concepts, and (2) a 4-point Likert scale survey that initially consisted 60 statements to assess the student's attitude and experiences toward mathematics and the factors affecting their academic performance, specifically their mathematical competence. The researchers-made test and the Likert scale survey both underwent a rigorous validation process to ensure their validity and accuracy. After a thorough validation process, the researchers then made edits to the questionnaires to further ensure its credibility. After finalizing the researchers-made test and the Likert scale survey, researchers sought for the conduct of pilot testing of these instruments to a total of thirty-nine participants from the pilot population, which were given 180 minutes to complete both. Researchers ensured to provide students with clear instructions, supervision, and assistance as needed. It was administered in a controlled classroom environment to ensure a consistent and fair testing experience.

After collecting data from the pilot testing, an item analysis of the results from researchers-made test was conducted to assess the performance of the students on each item. As a result of testing each item's difficulty index and discrimination index, sixteen items were retained, twenty-four were revised, and nineteen were rejected, leaving a final version of the researchers-made test with forty (40) items. On the other hand, the Likert scale survey underwent a series of Cronbach's alpha (CA) tests to ensure its internal consistency. To add context, the initial CA value for the instrument was 0.676, which indicates questionable reliability of the instrument. In order to obtain a reliable instrument, the statistical application JASP suggested removing twenty-five items that were negatively correlated with the other items, which then enabled the instrument to obtain a CA value of 0.921 which is more than the acceptable value of 0.70. This ultimately led to only thirty-five (35) statements which were retained for the final version of the Likert-scale survey.

Phase II was the data collection process. The researchers sought permission from the dean of the target institution to employ the validated researchers-made test and Likert-scale survey to the first-year BSED-Mathematics students enrolled at the university. A total of forty-six (46) students, which comprise all of the freshmen students in the program, were initially selected to participate in the study; however, only forty (40) students were able to attend the scheduled session for the examination and survey. *Vis-à-vis*, ethical approval for the study was secured from the target university's research ethics committee. Participants were then informed of the study's objectives, their rights as respondents, and the confidentiality of their data. All participants gave written informed consent prior to participation. Testing and survey administration were conducted in a standardized setting to minimize distractions and ensure fairness in assessment conditions. The participants were given a total of 180 minutes to complete both the test and the survey, with clear instructions provided and supervision and assistance by the researchers. Furthermore, the results of the researcher-made test were categorized as either "passed" or "failed" based on the students' performance scores. Students were considered to have passed the test if they scored at least twenty-four (24) out of forty (40) points, corresponding to a cut-off score of 60%. Similar to the conduct of pilot testing, the researchers ensured the respondents' privacy and confidentiality and that their responses would be kept confidential and used solely for research purposes only.

Phase III was dedicated to data analysis. The collected data were analyzed using various statistical tools to identify the total number of senior high school honor graduates and the students who passed the researchers-made test among first-year BSED-Mathematics students. Specifically, mean was frequency counts was used to determine the number of senior high school honor graduates and the total number of passers in the researcher-made test. Fisher's exact test was used to determine if there was a significant association between these numbers. Lastly, an exploratory factor analysis (EFA) was done to analyze the potential factors contributing to the observed disparity between these variables. Although the survey did not include open-ended questions, qualitative analysis was achieved by coding clusters of strong agreement or disagreement in Likert-scale responses into emerging themes such as academic pressure, gaps in foundational knowledge, and surface-level achievement. These thematic interpretations, guided by response frequency and factor loading patterns in EFA, strengthened the qualitative validity of the study and helped provide deeper insight into the context surrounding mathematical competence.

It is important to acknowledge that the sample size ($n = 40$) and the focus on a single higher education institution present limitations in terms of the generalizability of the findings. However, these limitations were mitigated through careful instrument validation, controlled data collection procedures, and appropriate statistical techniques such as EFA and Fisher's exact test, which are suitable for small samples. Moreover, the qualitative coding approach based on Likert-scale patterns, though unconventional, provided analytically meaningful results and added depth to the findings. Furthermore, the study's design prioritized internal validity and contextual relevance, which are crucial for case-focused educational research and may inform future investigations with broader samples.

RESULTS AND DISCUSSION

This section presents the findings of the study, highlighting the disparity between academic recognition and mathematical competence among senior high school honor graduates. It includes statistical analyses of the students' performance on the researcher-made mathematics test, the relationship between academic honors and test outcomes, and key factors contributing to this gap. The results are examined in the context of existing literature, providing insights into the implications of grade inflation and competency gaps in the Philippine education system. Results are presented in the following sections.

Number of First-Year BSED-Mathematics Students Who Passed the Researchers-Made Test in Mathematics

It can be gleaned in Table 1 that there are 37 students who graduated with academic recognition in senior high school out of the 40 student respondents, which indicates that majority of them had attained and perhaps surpassed the average grade in the standard requirement as stated in DepEd Order No. 36, series of 2016 to be called achievers. However, out of 40 students who took the researchers-made test, only three students managed to pass the researcher-made test, leading to a concerning 7.5% passing rate in the test. These were identified by the threshold score of 24 out of 40 points, which corresponds to the passing criterion of 60% in the target institution.

Table 1. Distribution of Students Based on their Academic Recognition and Performance in Researchers-made Test.

Academic Recognition	Performance in Researchers-made Test		Total
	Passed	Failed	
Honor Graduates	2	35	37
Non-Honor Graduates	1	2	3
Total	3	37	40

To add context to the rather alarming result, only 2 honor graduate students passed the test which raises concerns regarding overall mathematical competence specifically to the quality and quantity of honor graduates that the Philippines is producing yearly. The outcome highlighted that most students struggled to answer the test and did not meet the passing score, even when there were a large proportion of students in the group who were senior high school honor graduate students and despite the fact that they are in a mathematics program.

A common challenge among pre-service mathematics teacher students is the gap in foundational knowledge. Many students may not have received a rigorous education in earlier mathematical concepts. This can result in difficulties when they encounter more advanced topics that build upon these fundamentals. For instance, challenges with algebra can hinder progress in calculus or abstract mathematics, leaving students feeling overwhelmed and unprepared for their courses as cited by Math Stack Exchange. On top of that, mathematics often requires a high level of abstract thinking and problem-solving skills. Pre-service teachers, particularly those who may have previously excelled in more procedural forms of learning, might struggle with transitioning to a more abstract understanding of mathematical concepts as cited in the ERIC website.

The observed discrepancy in the students' performance may have existed due to the learning situations in schools, such as the fact that not all students are exposed to the same learning opportunities and environments, which may lead to the unequal development of skills and knowledge among students. Moreover, individual differences in comprehension, prior knowledge, and learner-teacher interactions further contribute

to this discrepancy. Additionally, this disparity among students emphasized the need for targeted interventions and equitable teaching strategies to address diverse learning needs and foster inclusive education.

This finding also speaks to the presence of a hidden curriculum in the honor system itself—one that may reward performance, compliance, and surface-level mastery rather than meaningful engagement with content. As suggested by mindset theorist Carol Dweck, students praised predominantly for high performance may develop a fixed mindset, fearing failure and avoiding intellectual risks, which in turn hampers deeper learning. This may partly explain why some honor graduates underperformed on a competence-based mathematics test—they may have learned to excel in environments that rewarded grades rather than true understanding.

Significant Association Between the Number of Senior High School Honor Graduates and the Total Number of Passers in the Researchers-Made Test

A Fisher exact test was conducted to examine the relationship between being an honor graduate and the mathematical competence of the student, which was identified through a researcher-made test in mathematics. The analysis revealed, as shown in Table 2, that the association between the two variables was not statistically significant at a 5% significance level, which indicates that there is no evidence to suggest a relationship between being an honor graduate and passing the mathematics test. In other words, the likelihood of passing the test does not appear to be dependent on whether an individual is an honor graduate or not. This finding suggests that academic distinctions (e.g., honor graduate status) may not necessarily translate to better performance on this specific researcher-made mathematics test. This could imply that factors other than general academic performance, such as test-specific skills, preparation strategies, or individual learning styles, play a more significant role in determining performance on the test.

Table 2. Fisher's Exact Test Results for Association Between the Number of Senior High School Honor Graduates and Number of Test Passers.

	p-value
Fisher's Exact Test	0.214
N of Valid Cases	40

The findings of this study, however, differed from those of Cabuquin et al. (2023), which revealed a strong and statistically significant correlation between students' proficiency in mathematics and their overall academic success. In connection with this finding, previous studies highlighted that academic recognition did not necessarily correlate with academic competence across various disciplines. For instance, an article by Long (2024) suggested that the emphasis on standardized assessments in educational systems created pressures that did not accurately reflect individual competency or potential. Similarly, Mazana et al. (2018) further emphasized that academic achievement often failed to accurately reflect deeper mathematical proficiency among students. Therefore, the findings of this study contradicted the common assumption that honor graduates were expected to excel in academic tasks. This confirmed the study's claim that there was a paradox among honor graduates: students who had received academic recognition in their previous schools did not align with their authentic competencies, particularly in mathematics.

The overwhelming trend of honor graduates underperforming in practical assessments suggested a disconnection between academic recognition and actual competency. According to Aguhayon et al. (2023), high grades of students did not always indicate strong competence or mastery of the subject. They unveiled that students might have excelled in areas measured by grades, yet gaps in understanding the subject matter can exist. The results from this study emphasized the need for educational institutions to re-evaluate how academic achievements were recognized and the criteria used to assess student performance. Traditional measures might overly focus on rote memorization and standardized testing without adequately assessing students' applied knowledge or critical thinking skills. Research indicated that the prevalent use of standardized assessments could lead to stress and might not effectively gauge students' comprehensive academic capabilities. A shift towards formative assessments or multiple evaluative approaches, including project-based learning, could provide a more holistic picture of student competencies (Aguhayon et al., 2023).

Further investigation is necessary to identify the variables that contribute to success on the mathematics test. Additionally, the test's validity in assessing mathematical proficiency should be evaluated to ensure it aligns

with the intended outcomes. For educational practice, the findings highlight the importance of not solely relying on academic honors as predictors of performance in specific assessments, hence the next subsection.

Factors Contributing to the Observed Disparity in the Number of Senior High School Honor Graduates and Their Performances in Researchers-Made Test in Mathematics

One of the objectives of this study was to investigate the potential factors that contributed to the disparity between academic recognition and mathematical competence among senior high school honor graduates, which was done by employing Exploratory Factor Analysis (EFA) and thematic analysis via manual coding using the responses of the students in the validated Likert-scale questionnaire. After employing the aforementioned clustering technique, the researchers successfully generated three significant factors which may explain the result above, and these were: (1) Educational Value and Personal Development; (2) Mathematical Engagement and Self-Efficacy; and (3) Resource Availability and Teacher Support.

Factor 1: Educational Value and Personal Development

One identified factor was named after the positive learning experiences and outcomes of first-year BSED Mathematics students in dealing with the mathematics subject during their senior high school years. This factor encompassed the themes of students' personal growth, critical thinking, and the value of education in professional development. It highlighted the significance of learning experiences that contributed to both individual satisfaction and professional growth.

The common denominator in identifying this factor was evidently supported by a similar study conducted by Mazana et al. (2018), in which they referred to attitude as a learned tendency of a person to respond positively or negatively toward an object, situation, concept, or another person. In this case, attitude was a learned tendency of senior high school honor graduates to respond positively or negatively toward mathematical concepts. According to their study, a positive attitude could improve students' learning, while a negative attitude hindered effective learning; therefore, it impacted the learning results and future performance of the students.

Furthermore, this observation aligns with the theoretical framework of Dweck's mindset theory. Students with a growth mindset—believing that intelligence and ability can be developed—are more likely to value learning, overcome setbacks, and ultimately perform better. A fixed mindset, on the other hand, may limit students' development, particularly when early achievements are mistaken for indicators of long-term ability.

Factor 2: Mathematical Engagement and Self-Efficacy

Another factor derived from this study was related to students' mathematical engagement and self-efficacy. This factor encompassed the themes of students' enjoyment, satisfaction, self-confidence, and a willingness to engage with mathematical challenges. It emphasized the connection between their abilities and their active participation in mathematical learning.

This factor was strongly supported by a related study conducted by Mazana et al. (2018), where they identified attitude aspects as one of the factors that affected students' behavior toward learning mathematics. Among the attitude aspects was self-confidence, which was an important factor that influenced students' learning and, therefore, affected their performance in mathematics. Students who built strong confidence in themselves were ready to take on mathematical challenges, leading them to academic achievement and success; in contrast, students with low self-confidence did not believe in themselves and, therefore, tended to avoid taking on mathematical challenges.

Bandura's theory of self-efficacy is a fitting lens through which to view this factor. According to Bandura, self-efficacy refers to the belief in one's ability to succeed in specific situations. Students with high self-efficacy are more likely to persevere through difficult tasks, set higher goals, and rebound from failures—qualities that are vital in mathematics education.

In addition to this factor, the enjoyment of dealing with mathematics, where students enjoyed doing and learning mathematics, could have influenced their behavior or cognitive aspect of attitude. This indicated that students might have learned mathematics because they found it enjoyable and interesting. This showed that the more students enjoyed doing mathematics, the more they were likely to engage in problem-solving, thus enhancing their learning and performance. However, students who did not find mathematics enjoyable and considered it boring would have fallen into a different path, and their mathematical learning and development would not have increased.

Factor 3: Resource Availability and Teacher Support

A further important factor that could have influenced the observed gap between academic recognition and mathematical competence in senior high school honor graduates was a supportive learning environment in mathematics. This encompassed the themes of accessibility, encouragement, and resources that contributed to a positive and effective mathematics learning experience. This was suitably reflected in the resource availability and teacher support factor, as it highlighted the importance of accessible learning materials, qualified teachers, and a conducive classroom atmosphere in fostering students' success in mathematics.

This generated factor of the study was supported by similar findings from a study conducted by Mang'uu (2021), which identified that instructional resources played an important role in academic performance among students. Additionally, the availability of resources and different teaching aids influenced effective teaching. These resources were important in the teaching-learning process and could have influenced teachers' performance either positively or negatively, indicating that teachers' working conditions affected their ability to provide quality education. The availability of resources needed to be prepared adequately and evaluated; however, the lack of most of these resources might have affected teachers' teaching support and students' mathematical competence.

CONCLUSION

This study uncovered a critical paradox in the academic landscape. While the majority of the first-year BSED-Mathematics students were honor graduates from senior high school, only a minimal number passed the researcher-made test in mathematics. This dissonance between academic recognition and demonstrated mathematical competence calls into question the validity of existing metrics for excellence. The analysis, supported by both quantitative and qualitative approaches, revealed that honor status did not significantly predict mathematical performance. Instead, factors such as educational value and personal development, mathematical engagement and self-efficacy, and resource availability and teacher support played a more substantial role.

These findings imply that current honor systems may unintentionally reward surface-level achievements rather than deep, meaningful learning. The educational environment, shaped by unequal access to quality instruction and learning resources, perpetuates this disparity. Recognizing this, there is an urgent need to recalibrate assessment and recognition systems in basic education. One way forward is to integrate competency-based assessments that capture practical understanding and application of knowledge, alongside traditional grade-based evaluations. Additionally, institutions may consider portfolio-based recognitions that include reflections, problem-solving demonstrations, and collaborative projects—providing a more holistic measure of student learning.

Further research is warranted to deepen the understanding of this academic paradox. Longitudinal studies could explore how honor graduates perform across different disciplines and institutional settings over time. Investigating how mindset theory (Dweck) and self-efficacy theory (Bandura) influence long-term academic trajectories may also offer insights into designing interventions that cultivate enduring learning behaviors and equitable educational outcomes.

In light of these findings, the study underscores the importance of shifting from a system that rewards performance alone to one that nurtures and recognizes authentic competence, critical thinking, and a sustained love for learning.

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