

Assessing the relationship between instructor productivity and academic performance among BS Entrepreneurship students

Camid, Joan Riz G.

Davao del Norte State College, Philippines (camid.joanriz@dnc.edu.ph)

Masiada, Jhonryl B.

Davao del Norte State College, Philippines (masiada.jhonryl@dnc.edu.ph)

Zafra, Janeth Kaye T.

Davao del Norte State College, Philippines (zafra.janethkaye@dnc.edu.ph)

Bansag, Rolando Jr. P. ✉

Davao del Norte State College, Philippines (rolandojr.bansag@dnc.edu.ph)



ISSN: 2243-7703
Online ISSN: 2243-7711

OPEN ACCESS

Received: 5 July 2025

Available Online: 22 July 2025

Revised: 16 July 2025

DOI: 10.5861/ijrse.2025.25229

Accepted: 20 July 2025

Abstract

This study determined the relationship between instructor productivity and academic performance among Bachelor of Science in Entrepreneurship students at Davao del Norte State College. It specifically evaluated the productivity of instructors in four areas: expertise, simulation, delegation, and assessment and reporting. The study utilized a descriptive correlational quantitative research approach with stratified sampling and selected 273 student respondents from a sample of 932. The data were gathered using validated Likert-scale questionnaires and evaluated with descriptive statistics and Pearson's correlation coefficient. The findings indicated that instructor productivity was rated very high overall, with assessment and reporting obtaining the highest mean score, while delegating got low result. Similarly, students exhibited great academic performance. Moreover, the findings of the study indicated a significant positive correlation between instructor productivity and academic performance (average $r = 0.501$, $p < 0.001$), highlighting the influence of exemplary instruction on student outcomes. The findings also highlight the significance of continuous professional growth that addresses delegation structures, evaluation techniques, and instructional innovation in order to improve academic achievement in entrepreneurship education.

Keywords: instructor productivity, academic performance, entrepreneurship education, higher education, Davao del Norte State College

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1. Introduction

Academic performance has significance to producing excellent graduates and is integral to a country's economic and social development (Singh et al., 2016). Students are the most valuable assets in higher education institutions, and academic performance represents educational process success (Ghani et al., 2012). With the Philippines placing poorly in the Programme for International Student Assessment (PISA) — 78th in 2018 and 77th in 2022 — there is a pressing need for monitoring and enhancing student performance through institutional support and intervention.

Globally, instructor productivity is essential for students' academic performance. In the study of Abeysekera (2021) it emphasizes that consistent grading mechanisms, clear instructions, and supportive learning environments all contribute to improved student outcomes. International research, such as those conducted at China's Jiangsu University, highlights the importance of professional development, instructional approaches, and instructor motivation in determining student performance. However, problems such as insufficient institutional support and scheduling constraints frequently prevent complete teacher participation in such development initiatives (Zhaohui and Anning, 2020).

In the Philippine context, similar patterns are observed. For instance, Bestlink College research indicates that an instructor's personality, teaching competence, and techniques all have a significant impact on student academic performance. Local educators, on the other hand, face challenges such as overwhelmed schedules and insufficient access to training opportunities, which can limit their capacity to improve teaching effectiveness and, ultimately, student results. Despite previous studies, there nevertheless remains a lack of knowledge of the full influence of instructor productivity on student performance, particularly in aspects such as motivation and professional development. As expectations in higher education rise, especially at institutions like Davao del Norte State College, it becomes essential to examine ways to enhance teacher effectiveness. The findings of this study will offer valuable insights for creating supportive learning environments that help improve academic outcomes.

This study is novel in its focus on the multifaceted notion of instructor productivity, which includes expertise, simulation, delegation, and assessment and reporting, and its relationship with academic performance, specifically among BS Entrepreneurship students. The study fills a gap in the literature by studying this relationship within the unique institutional context of Davao del Norte State College, which includes a rarely researched subgroup of incarcerated students enrolled in the College Education Behind Bars program. By focusing on the Philippine context and entrepreneurial education, this study adds peculiar, localized evidence to the larger discussion of teaching effectiveness.

Objectives of the Study - This study aims to:

- determine the level of academic performance of BS Entrepreneurship students.
- determine the level of instructor productivity in terms of expertise, simulation, delegation, and assessment and reporting.
- determine the significant relationship between instructor productivity and student academic performance.

2. Theoretical Framework

The independent variable of this study is anchored by the theory of B.F. Skinner (1957), the Reinforcement Theory, this theory states that an individual's behavior directly results from the consequences they received from the other people for that behavior. In this study, the theory relates to how an instructor's teaching strategy/ motivational strategy will impact the academic performance of students. If the action of the students will be followed by reinforcements, then their good behavior/actions will be strengthened and more likely to occur again in the future.

The dependent variable of the study is anchored to Self-Efficacy Theory by Albert Bandura (1986), this theory holds a significant relevance in understanding that the two key determinants of behavior are perceived self-efficacy and outcome expectancies. In the context of this study, the application of Self-Efficacy Theory provides a robust framework for emphasizing the importance of the instructor and the instructor's perceptions of his or her capabilities as key determinants of successful outcomes. It warrants a democratic ideal that suggests that all students are proficient and able to succeed, provided they have the opportunities and self-efficacy necessary, from their instructors, to pursue their goals.

Additionally, the link between instructor productivity & the academic performance of students is supported by Ajzen (1991) theory, the Theory of Planned Behavior where behaviors are influenced by intentions, which are determined by three factors: attitudes, subjective norms, and perceived behavioral control. In this study the Theory of Planned Behavior provides a framework for understanding the teacher's productivity and students' academic performance. In this case, the instructor's productivity is influenced by their intentions, which are shaped by three factors: Attitude (a teacher's positive attitude towards their work, would likely lead to higher productivity, Subjective Norms (the social pressure and expectations can influence and adopt teaching styles), and Perceived Behavioral Control (the belief of one's ability to perform the behavior successfully, can give motivation and confidence to implement effective teaching practices.

Conceptual Framework

In Figure 1 the independent variable of the study is Instructor's productivity with the following indicators: (a) Expertise, (b) Simulation, (c) Delegation, (d) Assessment, and (e) Reporting. On the other hand, the dependent variable of this study is the student's academic performance. The researchers highlight that academic performance can serve a dual role: as an indicator of student outcomes and as a dependent variable. As an indicator, it reflects a student's level of achievement and progress in their academic pursuits, helping to gauge the overall effectiveness of educational programs or curriculum. Additionally, it acts as a dependent variable, shaped by factors such as instructional quality, student motivation, and institutional support, which in turn influence the levels of academic success that students attain. This dual perspective offers a comprehensive understanding of academic performance in both research and practical assessment contexts.

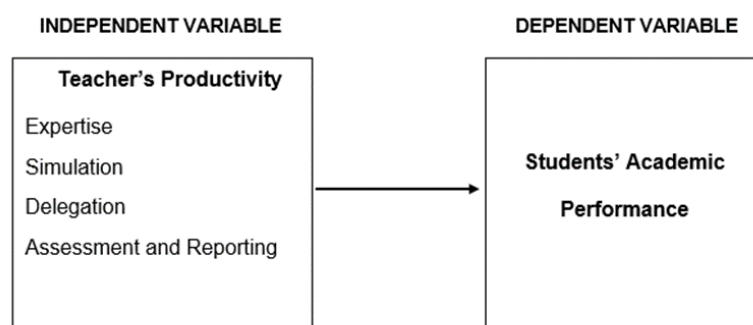


Figure 1. Conceptual Framework of the Study

3. Methodology

Research Design - This study employed a descriptive correlational quantitative research design to assess the relationship between instructor productivity and academic performance.

Participants and Sampling - The participants of the study were BS in Entrepreneurship students from Davao del Norte State College (DNSC), including regular students, adult learners, and those enrolled in the College Education Behind Bars (CEBB) program. All participants were aged between 19 and 40 years old. To ensure proportional representation across groups, stratified sampling was employed. Using Slovin's formula, a sample of 273 students was selected from the total population of 932 BS in Entrepreneurship students. The sample consisted of 242 regular students (89%), 25 adult learners—students who are either casual workers or non-regular government employees (9%), and 6 students from the CEBB program (2%).

Instruments - The researchers used adapted and validated questionnaires measured on a 5-point Likert scale to assess both instructor productivity and academic performance. The first set of questions assessed instructors' level of productivity with its indicators: expertise, simulation, delegation, and assessment and reporting (Tomas, et al. 2018). The second set of questions focused on the level of the academic performance of students (York, et al. 2015).

Data Collection Procedure - Permissions were secured from the college administration and Research Ethics Committee of the BS Entrepreneurship Program. Questionnaires were distributed, collected, and tabulated systematically.

Statistical Treatment - Data were analyzed using mean, standard deviation, and Pearson correlation coefficient (r).

Ethical Considerations - The study followed important ethical standards such as voluntary participation, in which respondents agreed to participate in the study without pressure. Informed consent forms were disseminated, and written consent was gained by clearly explaining the study's aim, procedures, and possible risks prior to participation. Participants' privacy and confidentiality were adequately safeguarded by preserving personal information and ensuring data was only utilized for research purposes. Furthermore, the researchers avoided any sort of misconduct, such as fabrication, falsification, or plagiarism, which ensured the research's integrity and credibility.

4. Results and Discussion

This part presents the results, analysis, and interpretation of the discoveries made in the study. The data is presented in both tabular and textual forms. All inferential results were analyzed and interpreted at a 0.05 level of significance. The independent variable in this study was instructors' productivity, measured through four indicators: expertise, simulation, delegation, and assessment and reporting. The responses of BS Entrepreneurship students were analyzed to determine how these areas impact instructor effectiveness and, ultimately, student academic performance.

Table 1
The level of instructors' productivity

Indicators	Mean	SD	Description
Expertise	4.37	0.90	Very High
Simulation	4.37	0.77	Very High
Delegation	4.19	0.83	High
Assessment and Reporting	4.45	0.74	Very High
Overall Mean	4.35	0.81	Very High

As presented in Table 1, the overall mean score for instructors' productivity was 4.35 with a standard deviation of 0.81, indicating a very high level of productivity. Among the indicators, assessment and reporting

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ranked highest with a mean of 4.45, followed by expertise with a mean of 4.37, simulation with a mean of 4.37, and delegation with a mean of 4.19. These findings suggest that instructors are generally performing well across all indicators, especially in assessment practices.

Assessment and reporting are key drivers of learning outcomes, as supported by Meidelina et al. (2021), who emphasized their role in improving instructional quality and promoting transparency. Although delegation scored slightly lower, it remains essential for managing workloads and enhancing team performance, as noted by Lou et al. (2024). The overall high productivity reflects the instructors' strong professional skills, teaching innovation, and alignment with effective educational practices, as also supported by Tadesse and Khalid (2022).

Table 2
The level of academic performance of students

Statement	Mean	SD	Description
1. I made myself ready in all my subjects.	4.16	0.76	High
2. I pay attention and listen during every discussion.	4.35	0.75	Very High
3. I want to get good grades in every subject.	4.66	0.68	Very High
4. I actively participate in every discussion.	4.08	0.85	High
5. I gain focus when I see technical problems.	4.05	0.83	High
6. I enjoy homework and activities because they help me improve my skills in every subject.	3.91	0.94	High
7. I exert more effort when I do difficult assignments.	4.14	0.88	High
8. Solving problems is a useful hobby for me.	3.98	0.93	High
Overall Mean	4.17	0.83	High

Table 2 indicates that the academic performance of BS Entrepreneurship students at Davao del Norte State College has an overall mean of 4.17 and a standard deviation of 0.83, indicating a high level of performance that is oftentimes manifested. The statements "I want to get good grades in every subject" and "I pay attention and listen during every discussion" received the highest mean scores, implying strong intrinsic motivation and goal-setting behavior. Yap (2019) agrees, stating that good study habits are favorably related to academic success. Overall, high level of academic performance is ascribed to good study habits, motivation, and a positive learning environment. Pathak (2020) also underlined the need of self-discipline and effective learning practices in improving academic performance. These findings underscore the significant relationship between instructor productivity and student academic performance.

Table 3
Significance in the relationship between instructor productivity and academic performance of students

Instructor Productivity Indicators	Academic Performance of Students	r-value	r ²	p-value	Decision
Expertise		0.434	0.188	0.001	Reject Ho
Simulation		0.650	0.423	0.001	Reject Ho
Delegation		0.611	0.373	0.001	Reject Ho
Assessment and Reporting		0.615	0.378	0.001	Reject Ho

Table 3 indicates that all indicators of instructor productivity have a significant correlation with the academic performance of students, with an average r-value of 0.501, r² of 0.2510, and a p-value of 0.001, substantially below the 0.05 level of significance. Therefore, the null hypothesis is rejected. Instructor expertise has a significant effect on academic performance as it enables students understand complex concepts and use practical solutions (Whittle et al., 2018). Furthermore, García and Valverde (2020) claims that simulation and delegation strengthen comprehension and retention by encouraging active learning and critical thinking skills. Johnson and Turner (2021) discovered that regular, inclusive evaluations direct students toward improvement and contribute to greater academic performance, highlighting the value of assessment and reporting.

5. Conclusion

Based on the findings of the study, instructors' productivity shows a significant influence on the academic

performance of BS Entrepreneurship students at Davao del Norte State College. Overall, instructor productivity was rated very high, particularly in the domains of expertise, simulation, and assessment and reporting, while delegation was rated high, highlighting space for growth. The variation in scores across the variables indicates Entrep faculty's individual teaching abilities and areas for improvement. While they excel at providing content and grading students, better delegation strategies could boost teaching efficacy even further. All four domains, namely, expertise, simulation, delegation, and assessment and reporting, showed a significant positive correlation with academic performance, confirming the study's theoretical framework that instructor productivity has a direct impact on student achievement. For practitioners, these findings underscore the need for continuous reflection and training in areas that directly affect student learning. For students, particularly those in entrepreneurial programs, the study highlights how instructional quality influences not just grades, but also readiness for real-world challenges. Improved teacher productivity can lead to better learner engagement, critical thinking development, and performance in both academic and future business environments.

Practical Implications of the Study - The findings of this study have noteworthy practical significance. For educational leaders, the findings highlight their importance of supporting instructor development, particularly in underserved areas such as delegation. This study implies that higher education policymakers should invest in training and performance monitoring to improve academic outcomes. Furthermore, the findings underline the importance of focused support in specific situations such as correctional education, where instructional efficiency has a direct impact on rehabilitation and academic performance.

Recommendations - Based on the study's findings, it is recommended that the BS Entrepreneurship faculty at Davao del Norte State College continue improve their productivity by engaging in professional development programs such as seminars, workshops, and training on effective teaching strategies, delegation, assessment, and classroom management. These activities are designed to help instructors stay up to date on innovative techniques while also increasing their confidence and effectiveness in providing training. Moreover, to increase the academic performance of students, instructors are encouraged to utilize more engaging and interactive methods of instruction. This includes integrating technology, creating collaborative learning settings, and providing activities that promote creativity and critical thinking. Making learning more meaningful and pleasant may boost student motivation and performance. Furthermore, school administrators should support faculty by ensuring open communication, providing adequate resources, and promoting a culture of collaboration and continuous improvement. Operational guidelines and institutional policies should focus on leadership development, strong work ethics, and professional growth to create a productive and supportive educational environment. Future research may further explore instructional performance and its impact on learning outcomes across other disciplines.

Acknowledgements - The authors would like to express their sincere gratitude to Davao del Norte State College, the faculty of the BS Entrepreneurship program, and the student respondents for their valuable participation in this research. Special thanks are extended to the BS Entrepreneurship Core Group for providing the ethical guidelines, and to the academic advisors for their unwavering support and guidance throughout the study.

AI Assistance Statement - This study utilized AI-assisted tools, specifically ChatGPT by OpenAI, to enhance grammar, coherence, and clarity during the manuscript's preparation. The authors ensured that all content remains original, research-based, and ethically reviewed in accordance with academic writing standards.

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