



Research Paper

The Demographic Profile and the Academic Performance of the BSAIS students at Laguna University During Hybrid Learning: A Basis for Enhanced Learning Modality

Lopez, Gabriel Matthew P. Amador, Archelle Diane H. Cambe, Meyrick Anthony L. Carta, Camille M. Joya, Aerish Gabrielle D. Lapugot, Christine R. Perez, Bernadhen H. Sarmiento, Zach T. Suilan, Risha Francheska P. Tubiera, Berlyn S.

Dr. Norayda M. Dimaculangan

Department of Business Administration and Accountancy Laguna University, Sta. Cruz, Laguna, Philippines

Keywords:

Hybrid learning,
Academic performance,
Demographic profile,
Learning modality

Abstract.

The study investigated the relationship between the demographic profile of Bachelor of Science in Accounting Information System (BSAIS) students at Laguna University (LU) and their academic performance during hybrid learning. The contribution to resolving the gap by validating hybrid learning as an effective instructional approach, providing insights into deep learning approaches, informing instructional design practices, improving student outcomes, and guiding further research in the field. Utilizing a descriptive-correlational approach with a quantitative method, the researchers employed a self-made questionnaire for 144 (3rd to 4th) year BSAIS students.

The analysis revealed a significant difference in academic performance between the first and second semesters of the academic year 2022-2023. The computed mean (1.74) and t-value (83.686), exceeding the t-critical value (1.976), signified the difference. The means that there is a significant difference between the academic performance of BSAIS students based on the general weighted average during the first and second semesters of the academic year 2022-2023. The second semester correlation coefficient demonstrated a strong positive relationship between demographic profile and academic performance at the 0.05 level (2-tailed). The study suggests a very strong and positive relationship between the demographic profile and academic performance of the BSAIS students at LU during hybrid learning in the second semester across all the variables. The study revealed a

significant relationship between students' demographic profile and their academic performance. It is recommended that LU take a holistic approach to embrace and optimize hybrid learning. These measures collectively aim to create a dynamic and supportive environment, maximizing the benefits of hybrid learning for the academic success of BSAIS students at LU.

Received 29 Apr., 2024; Revised 06 May, 2024; Accepted 08 May, 2024 © The author(s) 2024.
Published with open access at www.questjournals.org

I. Introduction.

The COVID-19 pandemic has instigated significant shifts in various sectors, notably in education. To address the crisis, the education industry has swiftly adopted innovative solutions, with hybrid learning emerging as a prominent approach. This study is aimed at understanding the effects of hybrid learning on the academic performance of Bachelor of Science in Accounting Information System (BSAIS) students at Laguna University.

The adoption of hybrid learning¹ has been facilitated by advancements in information and communication technologies, encouraging Higher Education Institutions (HEIs) to blend physical and virtual learning environments². Laguna University, in compliance with mandates from the Commission on Higher Education (CHED), has embraced hybrid learning as part of its educational strategy.³

It focuses on assessing the impact of hybrid learning on the academic performance of BSAIS students. It aims to explore demographic profiles, compare academic performance across semesters, evaluate student involvement in academic activities, and investigate potential relationships between demographic factors and academic achievement.

II. Material and Method(s)

Quantitative research design was utilized to investigate the academic performance and demographic profile of BSAIS students at LU during hybrid learning. A total of 144 BSAIS students, representing both genders and various year levels, participated in the study. Data were collected using a structured questionnaire, gathering information on demographic variables and academic performance metrics such as GWA. Descriptive statistics⁴ were utilized to analyze demographic profiles, while frequency distribution was employed to examine academic performance based on GWA. Statistical analyses, including t-tests and Pearson correlation coefficient, were conducted using Real Statistics Data Analysis Tools in Microsoft Excel⁵ to assess significant differences in academic performance between semesters and to explore the relationship between demographic variables and academic outcomes. This detailed approach ensures the transparency, replicability, and methodological rigor of the research process.

III. Results

Academic Performance of BSAIS Students Based on General Weighted Average (GWA)

The GWA of the respondents is one of the components used to determine the academic performance of the respondents during the 1st and 2nd semesters of the academic year 2022-2023.

General Weighted Average during the First Semester of the Academic Year 2022-2023

Table 1 shows the level of academic performance of BSAIS students based on GWA during the First Semester of the Academic Year 2022- 2023.

Table 1

Academic performance of BSAIS students based on general weighted average (GWA) during the first semester of the academic year 2022-2023

Boundaries		Frequency	Percentage	Remarks
4.01	5.00	0	0.00%	FAILED
3.01	4.00	0	0.00%	COND
2.76	3.00	0	0.00%	PASSED
2.51	2.75	0	0.00%	PASSED
2.26	2.50	10	6.95%	PASSED
2.01	2.25	12	8.33%	PASSED
1.76	2.00	32	22.22%	PASSED
1.51	1.75	60	41.67%	PASSED

The Demographic Profile and the Academic Performance of the BSAIS students at Laguna ..

1.26	1.50	30	20.83%	PASSED
1.01	1.25	0	0.00%	PASSED
1.00		0	0.00%	PASSED
Total		144		

The majority of the BSAIS respondents had the “1.51 – 1.75” GWA range, yielding the highest frequency of 60 and percentage 41.67% and was remarked as passed. This is followed by “1.76 – 2.00” with frequency of 32 and percentage 22.22% and was remarked as passed. Out of 144 responses, 30 responses or 20.83% had the GWA range from “1.26 – 1.50” and was remarked as passed. Furthermore, ”2.01 – 2.25” GWA range, 12 responses out of 144 (8.33%) fell within that range, and 10 out of 144 (6.95%) fell within the “2.26 – 2.50” GWA range.

The data indicates that the learning modality implemented during the 1st semester of the 2022-2023 academic year influenced BSAIS students, as reflected in their general weighted average. However, a significant number of students fall within the 2.01-2.25 and 2.26-2.50 GWA ranges. This demonstrates that, on average, the learning modality implemented during this semester has affected the academic performance of BSAIS students. Moreover, it indicated several factors that were potentially related to the nature of the online learning modality. Factors such as the effectiveness of online teaching methods, students’ adaptability to online learning, and the resources used for online education could have had a significant contribution to how students performed during the online learning modality.

A study conducted by Kofoed et al., (2021) showed that online learning lowered a student’s final grade by about 0.2 standard deviations. Moreover, this study confirms the findings of previous papers, which found that the negative effect of online learning was driven by students with lower academic ability.

General Weighted Average during the Second Semester of the Academic Year 2022- 2023

Table 2 shows the level of academic performance of BSAIS students based on GWA during second semester academic year 2022-2023.

The majority of the BSAIS respondents had the “1.51 – 1.75” GWA range, yielding the highest frequency of 83 and percentage 57.64% and were remarked as passed. This is followed by “1.76 – 2.00” with frequency of 49 and percentage 34.03% and were remarked as passed. Out of 144 responses, 10 responses or 6.94% had the GWA range from “1.26 – 1.50” and were also remarked as passed. Furthermore, on “2.01 – 2.25” GWA range, 2 responses out of 144 or 1.39 percent fell within that range.

Table 2

Academic performance of BSAIS students based on general weighted average (GWA) during the second semester of the academic year 2022-2023.

Boundaries		Frequency	Percentage	Remarks
4.01	5.00	0	0%	FAILED
3.01	4.00	0	0%	COND
2.76	3.00	0	0%	PASSED
2.51	2.75	0	0%	PASSED
2.26	2.5	0	0%	PASSED
2.01	2.25	2	1.39%	PASSED
1.76	2.00	49	34.03%	PASSED
1.51	1.75	83	57.64%	PASSED
1.26	1.5	10	6.94%	PASSED
1.01	1.25	0	0%	PASSED
1.00		0	0%	PASSED

Total	144		
-------	-----	--	--

The results indicate a notable shift towards higher General Weighted Averages (GWAs) among the BSAIS students during the 2nd semester of the academic year 2022- 2023. The transition from pure online learning in the 1st semester to a hybrid learning modality in the 2nd semester appears to have positively influenced academic performance. The increase in the percentage of GWAs in the 1.51 - 1.75 range suggests that the combination of online and in-person instruction, along with potential adjustments in teaching strategies, resources, and learning environments, contributed to a more favorable academic outcome for the BSAIS students during the 2nd semester. Thus, the hybrid learning modality appears to have yielded positive outcomes for the BSAIS students' GWA.

According to Morris et al (2021), students who participated in hybrid learning in Fall 2020 and attended class in person multiple times weekly had higher GWAs than their peers who self-reported attending class only two to four times per month. This study alone demonstrates the effectiveness of adopting hybrid learning in higher educational institutions.

The Community of Inquiry (CoI) theory of Garrison, Anderson, and Archer (2001) stated that hybrid learning offers the ability to speed up individualized learning while also facilitating exploratory and inquiry-based learning, which can improve students' learning experiences. This theory promotes critical reflective discussion and cooperative knowledge production as the implementation concept. It offers a distinct viewpoint, approach, and technology for both online learning and traditional classroom learning.

General Weighted Average during the 1st & 2nd semester of the academic year 2022- 2023

Table 3 presented a comparison of the general weighted average of BSAIS students during the 1st semester and 2nd semester of the academic year 2022 – 2023. The table served as the visual representation of the academic performance across the two semesters. The results showed that there was an increase in the general weighted average of BSAIS students from the 1st semester to the 2nd semester of the academic year 2022 – 2023. There were 23 responses that increased in the “1.51 – 1.75” GWA range.

Table3

Academic performance of BSAIS students based on general weighted average (GWA) during the 1st semester and 2nd semester of the academic year 2022- 2023

Grades	1st-Semester		2nd-Semester	
	Frequency	Percentage	Frequency	Percentage
1.00-1.25	0	0.00%	0	0.00%
1.26-1.50	30	20.83%	10	6.94%
1.51-1.75	60	41.67%	83	57.64%
1.76-2.00	32	22.22%	49	34.03%
2.01-2.25	12	8.33%	0	0.00%
2.26-2.50	10	6.94%	2	1.39%
2.51-2.75	0	0.00%	0	0.00%
2.76-3.00	0	0.00%	0	0.00%
3.01-5.00	0	0.00%	0	0.00%
Total	144	100.00%	144	100%

Involvement in Academic Activities

Membership in Academic Organizations

Table 4 shows the level of involvement in academic activities during the hybrid learning modality in terms of membership in academic organizations. Also shows the statements, mean, standard deviation, remarks and verbal interpretation.

From the statements, “How frequently does hybrid learning contribute to the expansion of your knowledge and skills in areas relevant to academic organizations during hybrid learning?” yielded the highest mean score (M=3.31 and SD=0.61) and were remarked as *always*. This is followed by “How frequently do you feel that the academic organizations provide enough opportunities for my academic growth during hybrid learning?” with a mean score (M=3.18 and SD=0.67) and were remarked as *most of the times*.

Table 4

Involvement in academic activities during the hybrid learning modality in terms of membership in academic organizations

STATEMENTS	MEAN	SD	REMARKS
How often does hybrid learning influence your engagement in academic organization events and initiatives?	3.12	0.57	Most of the time
How frequently does hybrid learning contribute to the expansion of your knowledge and skills in areas relevant to academic organizations during hybrid learning?	3.31	0.61	Always
How often does the hybrid learning environment foster a sense of belonging and companionship among academic organization members?	3.13	0.65	Most of the time
How often does the hybrid learning modality motivate me to take on leadership roles within academic organizations?	2.96	0.74	Most of the time
How frequently do you feel that the academic organizations provide enough opportunities for my academic growth during hybrid learning?	3.18	0.67	Most of the time
	3.14	0.65	Most of the time

On the other hand, the statement “How often does the hybrid learning modality motivate me to take on leadership roles within academic organizations?” received the lowest mean score of responses with (M=2.96 and SD=0.74) yet were remarked most of the times.

The involvement in academic activities during the hybrid learning modality in terms of membership in academic organizations attained a weighted mean score of 3.14 and a standard deviation of 0.65 and were verbally interpreted as most of the times among the respondents.

The results show that respondents generally agree with the statement that hybrid learning contributes to knowledge and skills expansion with the highest mean score of (M=3.31), followed by statements that state that the academic organizations provide opportunities for growth (M=3.18) with a most of the times remark.

However, statements about motivation for leadership roles in hybrid learning received a lower mean score (M=2.96), with most of the times remarks. Involvement in academic activities, particularly membership in organizations, were verbally interpreted by the respondents as most of the times (M=3.14).

Networked Learning and Connectivism Theory developed by George Siemens (2004) emphasizes the role of socialization and technology in learning. This theory suggests that learning is a network phenomenon where knowledge is organized in specific ways to show patterns of connectivity, and knowledge now exists across a network in a distributed manner rather than being contained solely in an individual's mind.

Additionally, Dima Krisna Wiedarjati (2021), claims that organizational activities allow students to stay active in the learning environment and to develop their skills even outside of class time. As a result, it can deter students from engaging in inappropriate conduct and allow them to use their time at school to engage in organizational tasks like developing and implementing school organization programs.

Involvement in School Wide Academic Activities

Table 5 shows the level of involvement in academic activities during the hybrid learning modality in terms of involvement in school wide academic activities. Also shows the statements, mean, standard deviation, remarks and verbal interpretation.

Table 5

Involvement in academic activities during the hybrid learning modality in terms of involvement in school wide academic activities.

STATEMENTS	MEAN	SD	REMARKS
How frequently do you find that school-wide academic activities during hybrid learning are meaningful and relevant to your education?	3.24	0.64	Most of the time
How often does hybrid learning provide enough opportunities for students to get involved in academic initiatives?	3.19	0.62	Most of the time
How often are you aware of the various academic organizations available at the school during hybrid learning?	3.19	0.69	Most of the time
How frequently do you feel that involvement in school-wide academic activities during hybrid learning positively impacts your academic performance?	3.09	0.70	Most of the time
How often do you feel that school values and recognizes students' contribution to academic events during hybrid learning?	3.12	0.71	Most of the time
	3.17	0.67	Most of the time

From the statements, “How frequently do you find that school-wide academic activities during hybrid learning are meaningful and relevant to your education?” yielded the highest mean score ($M=3.24$ and $SD=0.64$) and were remarked as *most of the times*. This is followed by “How often does hybrid learning provide enough opportunities for students to get involved in academic initiatives?” and “How often are you aware of the various academic organizations available at the school during hybrid learning?” with a mean score ($M=3.19$, $SD=0.62$ and $SD=0.69$) and were remarked as *most of the times*.

On the other hand, the statement “How frequently do you feel that involvement in school-wide academic activities during hybrid learning positively impacts your academic performance?” received the lowest mean score of responses with ($M=3.09$ and $SD=0.70$) yet were remarked *most of the times*.

The level of involvement in academic activities during the hybrid learning modality in terms of involvement in school wide academic activities attained a weighted mean score of 3.17 and a standard deviation of 0.67 and were verbally interpreted as *most of the times* among the respondents.

The results show that majority respondents generally find involvement in school-wide academic activities during hybrid learning meaningful and relevant, with a high mean score of 3.24 and interpreted as "most of the times". Similarly, opportunities for academic initiatives and awareness of academic organizations received comparable mean scores of 3.19, indicating a satisfactory level of perceived opportunities and awareness.

However, the statement regarding the perceived positive impact of involvement in school-wide academic activities on academic performance received a slightly lower mean score of 3.09. Despite this, the "most of the times" remark implies that respondents generally acknowledge a positive influence, albeit with some variability in their perceptions.

Overall, the level of involvement in academic activities during hybrid learning, especially in school-wide academic activities, achieved a weighted mean score of 3.17 and a standard deviation of 0.67. Verbal interpretation categorizes this as "most of the times" indicating a moderate level of involvement in these activities during hybrid learning.

Park, Martin, and Lambert's (2019) reinforced the idea that students' participation in academic activities serves as a meaningful predictor for their overall grades. The study dealt into variations within the student body, highlighting different approaches to participation in both online and in-class quizzes. Moreover, the findings emphasized that students who actively engage in various learning activities, such as contributing to discussion boards, utilizing email communication, and voluntarily taking optional online quizzes, exhibit a higher likelihood of succeeding in the course.

Honors and Awards Received

Table 6 shows the involvement in academic activities during the hybrid learning modality in terms of honors and awards received. Also, shows the statements, mean, standard deviation, remarks, and verbal interpretation.

From the statements, “How frequently does hybrid learning flexibility have enabled me to balance my academic workload and dedicate time to pursuing honors and awards?” yielded the highest mean score (M=2.97 and SD=0.74) and were remarked as most of the time. This is followed by “How often a hybrid learning environment has fostered me in a supportive and conducive atmosphere for pursuing honors and awards?” with a mean score (M=2.94 and SD=0.68) and were remarked as most of the times.

On the other hand, the statement “How often does hybrid learning provide me with opportunities to showcase my abilities and compete for honors and awards?” received the lowest mean score of responses with (M=3.87 and SD=0.71) yet were remarked most of the times.

The involvement in academic activities during the hybrid learning modality in terms of honors and awards received attained a weighted mean score of 2.92 and a standard deviation of 0.73 and were verbally interpreted as *most of the time* among the respondents.

Table 6

Involvement in academic activities during the hybrid learning modality in terms of honors and awards received.

STATEMENTS	MEAN	SD	REMARKS
How often does hybrid learning provide me with opportunities to showcase my abilities and compete for honors and awards?	2.87	0.71	Most of the time
How frequently does hybrid learning flexibility have enabled me to balance my academic workload and dedicate time to pursuing honors and awards?	2.97	0.74	Most of the time
How often has a hybrid learning environment fostered me in a supportive and conducive atmosphere for pursuing honors and awards?	2.94	0.68	Most of the time
How frequently has hybrid learning positively influenced the number of honors and awards I have received?	2.92	0.81	Most of the time
How often hybrid learning has exposed me to diverse perspectives and experiences that have strengthened my candidacy for academic excellence?	2.91	0.72	Most of the time
	2.92	0.73	Most of the time

The results show that students' performance, as indicated by the honors and awards received during hybrid learning assists in balancing the workload showing the highest mean score (M=2.97). Followed by statements reflecting the supportive and conducive atmosphere for pursuing such honors (M=2.94), which most of the time remarks.

However, statements about opportunities for showcasing abilities and competing for honors and awards received a lower mean score (M=3.87) with most of the time remarks. Respondents interpreted the involvement in academic activities during hybrid learning, specifically regarding the honors and awards received, as most of the time (M=2.92).

According to Tong et al. (2022) and Kazu et al. (2022) blended learning had a positive impact on a student's academic achievement and there is a meta-analysis study that shows the overall effect of hybrid learning on students' academic achievements is statistically higher.

Test of Significant difference between the Academic Performance of BSAIS Students based on the General Weighted Average

Table 7

Significant difference between the academic performance of BSAIS students based on the general weighted average during the first semester academic year 2022-2023 and the second semester of the academic year 2022-2023

Group	Mean	t-value	t-crit	Cohens'd	p-value	Analysis
FirstSemester (Control)	1.74	83.686	1.976	6.973	>.001	Significant
Second Semester (Experimental)						

*df=143; **Significantat.01level*

To test the significant difference between the academic performance of BSAIS students based on the general weighted average during the first semester academic year 2022-2023 and the second semester academic year 2022-2023 they were treated statistically using T-Test for One Samples thru Real Statistics Data Analysis Tools.

Table 7 presents the significant difference between the academic performance of BSAIS students based on the general weighted average during the first semester academic year 2022-2023 and the second semester academic year 2022-2023. Also shows the mean, t-value, t-crit-cohens' d, p-value, and analysis.

It also shows the computed mean value (1.74) and t-value (83.686), which are larger than the t-critical value (1.976). This means that there is a significant difference between the academic performance of BSAIS students based on the general weighted average during the first semester academic year 2022-2023 and the second semester academic year 2022- 2023. The effect size, Cohen's d, is 6.973, classified as "very large." This suggests that the hybrid learning modality is more effective than pure online learning.

A study conducted by Kofoed et al (2021) reveals that online learning lowered a student's final grade by about 0.2 standard deviations. Moreover, this study confirms the findings of previous papers, which identified that the negative effect of online learning was driven by students with lower academic ability.

In contrast, a survey conducted in spring 2021 found that accounting students preferred hybrid learning as a mode of delivery, resulting in 35% of votes compared to the 2019 survey that had only 27% of votes. Furthermore, this significant increase in preference is due to the flexibility offered by hybrid learning (Shurden & Shurden, 2021).

Test of a Significant Relationship between the Demographic Profile and the Academic Performance

To test the significant relationship between the demographic profile and the academic performance of BSAIS students at LU during hybrid learning during the first semester and second semester, they were treated statistically using Real Statistics Data Analysis Tools using the Pearson correlation coefficient.

Table8

Testofasignificantrelationshipbetweenthedemographicprofileandthe academic performance during first semester

Demographic Profile	Academic Performance	r-value	Degree of Correlation	p-value	Analysis
Gender	First Semester (Online)	0.808**	Very Strong Positive Correlation	<.001	Significant
Year Level		0.897**	Very Strong Positive Correlation	<.001	Significant
Family Monthly Income		0.845**	Very Strong Positive Correlation	<.001	Significant
Number of Family Members		0.967**	Very Strong Positive Correlation	<.001	Significant
Mode of Internet Connection		0.627**	Strong Positive Correlation	<.001	Significant

***Correlationissignificantatthe0.05level(2-tailed).*

The correlation coefficients measure the strength and direction of the relationship between the demographic profile and the academic performance of BSAIS students at Laguna University during hybrid learning during the first semester. A positive correlation indicates that as demographic profile, the academic performance also tends to increase.

A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation.

The correlation coefficients in Table 10 are all positive and significant at the 0.05 level (2-tailed). This suggests a very strong and positive relationship between the demographic profile and the academic performance of BSAIS students at Laguna University during pure online learning during the first semester across all the variables.

Online learning may pose difficulties, potentially influencing the GWAs of students. This resonates with findings from Lederman (2021) and Kofoed et al. (2021), highlighting that student with weaker academic backgrounds may struggle more in online courses, resulting in lower grades.

The observed impact on final grades, as mentioned by Cellini (2022), supports the idea that online learning can affect students' overall academic performance, emphasizing the need for targeted support during this mode of instruction.

The correlation coefficients in Table 11 are all positive and significant at the 0.05 level (2-tailed). This suggests a very strong and positive relationship between the demographic profile and the academic performance of BSAIS students at LU during hybrid learning during second semester across all the variables.

Table 9

Test of a significant relationship between the demographic profile and the academic performance during second semester

Demographic Profile	Academic Performance	r-value	Degree of Correlation	p-value	Analysis
Gender	Second Semester (Hybrid)	0.629**	Very Strong Positive Correlation	<.001	Significant
Year Level		0.839**	Very Strong Positive Correlation	<.001	Significant
Family Monthly Income		0.816**	Very Strong Positive Correlation	<.001	Significant
Number of Family Members		0.947**	Very Strong Positive Correlation	<.001	Significant
Mode of Internet Connection		0.739**	Strong Positive Correlation	<.001	Significant

**Correlation is significant at the 0.05 level (2-tailed).

These findings suggest that hybrid learning may be a promising approach for improving student outcomes. Kazu & Yalcin (2022) found that hybrid learning resulted in significantly higher mean scores and greater student enthusiasm compared to traditional face-to-face instruction. Furthermore, Rodrigo & Platon (2022) observed that students in the hybrid group not only scored higher (85%) compared to the traditional group (73%), but also displayed a shift towards deeper learning approaches. Additionally, Damo & Padagas (2020) noted that hybrid learning received high assessments across various dimensions, demonstrating its positive influence on both academic performance and student satisfaction.

IV. Discussions

The findings of the study reveal several important insights into the demographic profile and academic performance of BSAIS students during hybrid learning at Laguna University. Firstly, the predominance of female students and fourth-year students, along with the representation of middle-income families with large household sizes, underscores specific demographic trends within the BSAIS student population. These demographic characteristics may warrant targeted educational interventions and support programs to address the unique needs of these groups.

Secondly, the observed increase in academic performance, as indicated by higher General Weighted Averages (GWAs) during the second semester compared to the first semester, suggests the potential

effectiveness of hybrid instructional modalities. Combining online and in-person instruction appears to have positively influenced academic outcomes, prompting discussions about the specific instructional strategies and learning environments contributing to the improvement.

Moreover, students' positive perceptions of hybrid learning, evidenced by their active involvement in academic activities and membership in organizations, highlight the favorable reception of the instructional approach. Exploring the specific aspects of hybrid learning that students find beneficial could inform strategies to enhance student engagement and learning outcomes further.

Furthermore, the significant difference in academic performance between the first and second semesters underscores the importance of instructional delivery methods in shaping student outcomes. The finding underscores the need for ongoing evaluation and refinement of instructional strategies to optimize student success.

Additionally, the strong, positive relationship between demographic variables and academic performance emphasizes the interconnectedness of various factors influencing student

achievement. Understanding how demographic factors interact with instructional modalities can inform educational practice and policy, facilitating the development of targeted interventions to support student success. Highlights the significance of the findings in advancing our understanding of the relationship between demographic characteristics, instructional modalities, and academic performance among BSAIS students. The implications of these findings for educational practice, policy, and future research are considered in light of the broader literature on hybrid learning and student success.

V. To Conclude

Based on the comprehensive analysis of the research findings, the following conclusions were derived:

1. There is a significant relationship between the demographic profile and the academic performance of the students, indicating the rejection of the null hypothesis. Moreover, a positive correlation indicated that as the demographic profile improved, academic performance also tended to increase. This suggested that the demographic profile was substantial enough to establish a clear advantage for one learning approach over the other. The results also suggested that both learning approaches could effectively cater to a diverse student body and provide students with an opportunity to thrive academically.
2. Pure online and hybrid learning significantly impact students' overall academic performance, with hybrid emerging as the more effective approach. This is evident not only from the change in the General Weighted Average between semesters but also from observed variations in other academic performance indicators thus, the null hypothesis was also rejected.
3. The LU BSAIS students thrived in academic activities under the hybrid learning model. They actively participated in academic organizations, and school-wide events, and even pursued honors and awards. These differences were statistically significant, suggesting that hybrid learning significantly boosts student participation in academic activities compared to other learning approaches.

References:

- [1]. De Vera Jr., J. Prospero. (2022). CHED Memorandum Order No. 16, Series of 2022. Updates on On-site Learning in Higher Education. Commission on Higher Education. https://www.scribd.com/document/607990551/CHED-ORDER-16-ON-IN-PERSON-CLASSES#fullscreen&from_embed
- [2]. Tadese, M., Yeshaneh, A. and Mulu, G.B. (2022). Determinants of good academic performance among university students in Ethiopia: a cross-sectional study. *BMC Medical Education*, [online] 22(1), pp.1–9. doi:<https://doi.org/10.1186/s12909-022-03461-0>.
- [3]. Topping, K., Douglas, W., & Robertson, D. (2022). The Effectiveness of Online and Blended Learning from Schools: A Scoping Review. University of Dundee. ResearchGate. https://www.researchgate.net/publication/361392139_Effectiveness_of_online_and_blended_learning_from_schools_A_systematic_review
- [4]. Conner, B. and Johnson, E. (2017). *American Nurse Today* official Journal of the American Nurses Association (ANA). [online] American Nurse. Available at: <https://www.myamericannurse.com/research-101-descriptive-statistics/>.
- [5]. real-statistics.com. (n.d.). Data Analysis Tools | Real Statistics Using Excel. [online] Available at: <https://real-statistics.com/excel-environment/data-analysis-tools/>.
- [6]. Adongo, A. A., Dapaah, J. M., & Wireko, D. (2022). The influence of family size on academic performance of high school students in Ghana. *SN Social Sciences*, 2(9). <https://doi.org/10.1007/s43545-022-00478-6>
- [7]. Alanzi, K.A. (2018, October 8). "Female accounting students and their academic performance: evidence from Kuwait", *Journal of Islamic Accounting and Business Research*, Vol. 9 No. 5, pp. 662-672. <https://doi.org/10.1108/JIABR-10-2016-0128>

- [8]. Affum, M. Q. (n.d). The Effect of Internet on Students Studies: A Review. DigitalCommons@University of Nebraska - Lincoln. <https://digitalcommons.unl.edu/libphilprac/6932/>
- [9]. Alipio, M. (2020, April 13). Adjustment to college and academic performance: Insights from Filipino college freshmen in an allied health science course. <https://doi.org/10.35542/osf.io/74ysf>
- [11]. Alshurafat, H., Shbail, M. O. A., Masadeh, W., Dahmash, F. N., & Al-Msiedeen, J. M. (2021). Factors affecting online accounting education during the COVID-19 pandemic: an integrated perspective of social capital theory, the theory of reasoned action and the technology acceptance model. *Education and Information Technologies*, 26(6), 6995–7013. <https://doi.org/10.1007/s10639-021-10550-y>
- [12]. Anjum, S. (2021). Impact of Extracurricular Activities on Academic Performance of Students at Secondary Level. https://www.researchgate.net/publication/357797476_Impact_of_Extracurricular_Activities_on_Academic_Performance_of_Students_at_Secondary_Level
- [13]. Asio, J. M. R., Gadia, E. D., Abarintos, E. C., Paguio, D. P., & Balce, M. (2021). Internet Connection and learning device availability of college students: Basis for Institutionalizing flexible learning in the new Normal. *Studies in Humanities and Education*, 2(1), 56–69. <https://doi.org/10.48185/hs.v2i1.224>
- [14]. Bhandari, P. (2022). Correlational Research | When & How to Use. Scribbr. <https://www.scribbr.com/methodology/correlational-research/>
- [15]. Casas, R. R. L. (2023). Family Income Classification on Students' Academic Performance: A Correlational Study. Zenodo (CERN European Organization for Nuclear Research). <https://doi.org/10.5281/zenodo.8278214>
- [16]. Damo, L. E., & Padagas, R. (2020). Can Hybrid Learning Supplant the Brick-and-Stone Classroom in Teaching “Strategies for Academic Success in College”? A Focus Assessment Study. *Universal Journal of Educational Research*, 8(5), 1711–1718. <https://doi.org/10.13189/ujer.2020.080507>
- [17]. Daniel. (2022, November 10). What Is Hybrid Learning? - ViewSonic Library. ViewSonic Library. <https://www.viewsonic.com/library/education/what-is-hybrid-learning/>
- [18]. Delelis, M. (2019). The relationship of socio-economic status and the students' academic achievement of the Bachelor of Science in Accounting Information System. <https://www.indianjournals.com/ijor.aspx?target=ijor:ijarmss&volume=8&issue=3&article=006>
- [19]. Eliveria, A & Serami, L & Fomorca, Lambert & Dela Cruz, Josephine. (2019). Investigating students' engagement in a hybrid learning environment. *IOP Conference Series: Materials Science and Engineering*. 482. 012011. 10.1088/1757-899X/482/1/012011.
- [20]. El Refae, G., Kaba, A., & Eletter, S. (2021). The Impact of Demographic Characteristics on Academic Performance: Face-to-Face Learning Versus Distance Learning Implemented to Prevent the Spread of COVID-19. *International Review of Research in Open and Distributed Learning*, 22(1).
- [21]. Estrellado, C. J. P. (2021). Transition to Post-Pandemic Education in the Philippines: Unfolding Insights. *International Journal of Scientific and Research Publications*, 11(12), 507–513. <https://doi.org/10.29322/ijsrp.11.12.2021.p12074>
- [22]. Frost A. (2019). Simple Random Sampling: Definition & Examples - Statistics by Jim. <https://statisticsbyjim.com/basics/simple-random-sampling/>
- [23]. Garrison, Anderson, and Archer (2001). Transforming education together: The Global Education in Coalition in action. https://unesdoc.unesco.org/ark:/48223/pf0000384812?mc_cid=f6e8a6918f&m&fbclid=IwAR35dwe1_UfS0SMrD9RYT9IB_KOQ8W2CK9hdxxpYRLHosdzQZedr7wt3O4
- [24]. Importance of Internet in Education | ACT Fibernet. (2023, April 10). <https://www.actcorp.in/blog/how-the-internet-is-revolutionizing-education>
- [25]. Johnson, E., Morwane, R., Dada, S., Pretorius, G. J., & Lotriet, M. (2018). Adult Learners' Perspectives on Their Engagement in a Hybrid Learning Postgraduate Programme. *The Journal of Continuing Higher Education*, 66(2), 88–105. <https://doi.org/10.1080/07377363.2018.1469071>
- [26]. Kazu, I. Y. & Yalçın C. K. (2022). Investigation of the Effectiveness of Hybrid Learning on Academic Achievement: A Meta-Analysis Study. *Investigation of the Effectiveness of Hybrid Learning on Academic Achievement: A Meta-Analysis Study*, 18. <https://eric.ed.gov/?id=EJ1332714>
- [27]. Kofoed, M. S., Gebhart L., Gilmore D., & Moschitto R. (2021, May). Zooming to Class? Experimental Evidence on College Students' Online Learning during COVID-19. <https://docs.iza.org/dp14356>
- [28]. Lederman, D. (2021). Do college students perform worse in online courses? One study's answer. *Inside Higher Ed | Higher Education News, Events and Jobs*. <https://www.insidehighered.com/news/2021/08/06/do-college-students-perform-worse-online-courses-one-studysanswer?fbclid=IwAR1BSIN9WH6PeI6rcwTiXfhgo2ZCqxCWXR060dt14SOw8lh2xPU64qKhgM#:~:text=Study%20finds%20that%20students%20in,especially%20related%20to%20the%20pandemic>
- [29]. Mamun, A. A. (2019). Assessing the Gender Effects on Students' Accounting Course Performance in Bangladesh: A case study of Bangladesh University of Business & Technology. *The Journal of Business*, 4(1), 01–08. <https://doi.org/10.18533/job.v4i1.112>
- [30]. Martí-Ballester, C. P. (2019). Factors that Influence Academic Performance: Analyzing Gender Differences in Accounting Students. <https://www.redalyc.org/journal/440/44058158002/html/>
- [31]. McElroy, T. (2021, December 3). Addressing The Digital Divide In Education: Technology And Internet Access For Students In Underserved Communities. *Forbes*. <https://www.forbes.com/sites/forbestechcouncil/2021/12/03/addressing-the-digital-divide-in-education-technology-and-internet-access-for-students-in-underserved-communities/?sh=69992afa5cec>
- [32]. Morris, S. A., & Boyce, H., & Ghio, C., & Dee, A., & Pathwick-Paszyc, A., & DiMilla, P., & Reisberg, R. (2021, July 26). Hybrid Learning: For Better or Worse? The Effect of Hybrid Learning on Grades and Attitudes of First-year Engineers in Chemistry Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. <https://peer.asee.org/37263>
- [33]. Olagundoye, C., & Adebile, R. F. (2019). Family size influence of students' attitude and performance in literature- in-English in public secondary schools. *Asian Journal of Interdisciplinary Research*, 121–127. <https://doi.org/10.34>

- 256/ajir19310
- [34]. Owens, A. (2018). Income Segregation between School Districts and Inequality in Students' Achievement. *Sociology of Education*, 91(1), 1-27. <https://eric.ed.gov/?id=EJ1166077>
- [35]. Park, E., Martin, F., & Lambert, R. (2019). Examining predictive factors for student success in a hybrid learning course. *Quarterly Review of Distance Education*, (2),11-74. https://drive.google.com/file/d/1Lah9qKPr4Jag_2qX4aXAz8mgwYmJizII/view
- [36]. Poor Internet connection leaves rural students behind. (2020, March 2). MSUToday | Michigan State University. Poor Internet connection leaves rural students behind | MSUToday| Michigan State University. <https://msutoday.msu.edu/news/2020/poor-internet-connection-leaves-rural-students-behin>
- [37]. Raes, A., Vanneste, P., Pieters, M., Windey, I., Van Den Noortgate, W., & Depaepe, F. (2020). Learning and instruction in the hybrid virtual classroom: An investigation of students' engagement and the effect of quizzes. *Computers & Education*, 143, 103682. <https://doi.org/10.1016/j.compedu.2019.103682>
- [38]. Rodrigo, R.T. & Platon, L.H. (2022). Hybrid learning for the digital natives: Impacts on Academic Performance and Learning Approaches. *Kasetsart Journal of Social Sciences*, 43 (1). ResearchGate. https://www.researchgate.net/publication/358423998_Hybrid_learning_for_the_digital_natives_Impacts_on_academic_performance_and_learning_approaches
- [39]. Shimkovich, E., Makhmutova, G., Ivanova, D., &Urunova, R. (2022). Advantages and Disadvantages of Hybrid Learning for International Students. *ARPHA Proceedings*, 5, 1533-1544. <https://doi.org/10.21070/ups.242>
- [40]. Siemens, G. (2004). Connectivism, A learning theory for the digital age. *International Journal of Instructional Technology & Distance Learning*, 2(1), Retrieved from https://www.itdl.org/Journal/Jan_05/article01.htm.
- [41]. Shurden S. & Shurden M. (2021). Accounting student preferences regarding traditional, hybrid, or online instruction: pre and post pandemic. *Journal of Finance and Accountancy*, Volume 30, 4-5. <https://www.aabri.com/manuscripts/213479>
- [42]. Tadese, M., Yeshaneh, A., & Mulu, G. B. (2022). Determinants of good academic performance among university students in Ethiopia: a cross-sectional study. *BMC Medical Education*, 22(1).<https://doi.org/10.1186/s12909-022-03461-0>
- [43]. Tong, D. H., Uyen, B. P., & Ngan, L. K. (2022). The effectiveness of blended learning on students' academic achievement, self-study skills, and learning attitudes: A quasi-experiment study in teaching the conventions for coordinates in the plane. <https://www.sciencedirect.com/science/article/pii/S2405844022039457>
- [44]. Topping, K., Douglas, W., & Robertson, D. (2022). The Effectiveness of Online and Blended Learning from Schools: A Scoping Review. *University of Dundee*. ResearchGate. https://www.researchgate.net/publication/361392139_Effectiveness_of_online_and_blended_learning_from_schools_A_systematic_review
- [45]. Tumasias, J. (2022). Web-Based Platform for Don Bosco High School – Senior High School – Technical Vocational Education Track in Adoption of Hybrid Learning.https://www.academia.edu/80462472/Web_Based_Platform_for_Don_Bosco_High_School_Senior_High_School_Technical_Vocational_Education_Track_in_Adoption_of_Hybrid_Learning
- [46]. UNESCO. (2023). Transforming education together: the Global Education Coalition in action. https://unesdoc.unesco.org/ark:/48223/pf0000384812?mc_cid=f6e8a6918f&mc_eid=UNIQID
- [47]. Unugo, L. (2021). Family Sizes: It's Implications on Students' Academic Achievements in Social Studies. <https://unijerps.org/index.php/unijerps/article/download/22/18>
- [48]. Wiedarjati, D. &Sudrajat, A. (2021). What Makes Students Participate in School Organizations? The Role of Motivation and School Environment. <https://knepublishing.com/index.php/KnE-Social/article/view/9987>
- [49]. Xhomara, N. & Karabina, M. (2022). The Influence of Online Learning on Academic Performance and Students' Satisfaction - MokslinėsLeidybos. *MokslinėsLeidybos Deimantas - Diamond Scientific Publishing*. <https://www.dpublication.com/abstract-of-3rd-iaceducation/12-2031/>