Satisfaction on the Blended Learning and its Relationship to Academic Performance of the STHM Students of Colegio De San Juan De Letran Calamba

Christian C. Aguado, MBA, MIHM, CGSP., Carmel N. Hemedez, PhD

School of Tourism and Hospitality Management, Colegio de San Juan de Letran

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ABSTRACT

Blended learning has emerged as a globally recognized approach to higher education, especially in the post-pandemic era, offering flexibility and enhanced learning experiences through digital platforms. However, in developing contexts, issues such as technological limitations, device accessibility, and inconsistent internet connectivity continue to hinder its effective implementation, highlighting the need to investigate how such factors impact student satisfaction and academic performance. This study aimed to assess the satisfaction levels of students from the School of Tourism and Hospitality Management (STHM) at Colegio de San Juan de Letran Calamba toward blended learning and to examine its relationship with academic achievement; specifically focusing on Instructor Presence, Learner–Learner Interaction, Course Content, Technological Support, and Course Assessment. Utilizing a descriptive-correlational design, the study gathered data from 53 second to fourth-year BS Hospitality Management and BS Tourism Management students through a validated self-made survey instrument, analyzed using non-parametric statistical tools. Results revealed that students showed moderately high satisfaction levels, yet no significant relationship was found between their satisfaction and academic performance across all variables. The findings suggest that satisfaction alone does not guarantee higher academic outcomes, as learning is influenced by more complex, multifactorial conditions. It is recommended to strengthen assessment design, improve instructor competencies, and address technological barriers to maximize the benefits of blended learning.

Keywords: Tourism Management, Hospitality Management, blended learning, academic performance, and student satisfaction

INTRODUCTION

In the past decade, blended learning has emerged as a pivotal educational strategy in both developed and developing countries, driven by the need for more flexible, inclusive, and technology-integrated learning environments (Boelens et al., 2018). The global shift to digital and remote learning accelerated significantly due to the COVID-19 pandemic, which forced educational institutions worldwide to transition quickly from traditional face-to-face methods to more adaptive, tech-enabled formats. UNESCO (2022) noted that the global educational landscape has increasingly embraced hybrid and blended learning to promote educational continuity, equity, and resilience. Countries with strong tourism and hospitality sectors like the Philippines have recognized the need for future professionals to develop competencies through flexible learning modalities that simulate real-world industry environments (CHED, 2021). Locally, the Commission on Higher Education has supported the integration of flexible learning policies post-pandemic, and institutions like Colegio de San Juan de Letran Calamba have adopted blended learning approaches across programs, including Tourism and Hospitality Management (STHM). This shift reflects broader international efforts to bridge digital divides and improve student learning outcomes through innovation and technology.

However, despite the integration of blended learning into mainstream education, there remain substantial gaps in understanding its effectiveness from the learners' perspective, especially within specialized programs such as Hospitality and Tourism Management. While numerous studies have emphasized the benefits of blended learning, including flexibility, accessibility, and technological engagement (Hrastinski, 2019), others argue that

satisfaction and engagement do not necessarily translate into academic success (Martin & Bolliger, 2018). Local studies have also shown that student satisfaction with blended learning can vary depending on the adequacy of mobile devices, internet stability, and instructional design (Guillermo, 2022). This discrepancy becomes even more pronounced in practice-oriented fields such as tourism and hospitality, where learning is expected to be experiential, collaborative, and skill-driven. Thus, there is a need to investigate how student satisfaction within blended learning environments relates—or does not relate—to academic performance, especially among STHM students in the Philippine context. The limited evidence linking satisfaction with academic outcomes in blended settings highlights the necessity of this study to understand how these components interact in real educational settings.

To provide a comprehensive foundation for this investigation, previous literature was reviewed. Al-Fraihat et al. (2020) emphasized that learner satisfaction in blended learning is influenced by several factors, including system quality, instructor presence, course content, and assessment methods. Similarly, Mujallid (2024) investigated the implementation of digital active learning strategies in blended environments and found significant improvements in students' social–emotional learning skills and engagement. The study highlighted that incorporating active learning activities led to enhanced self-awareness and social awareness among graduate students. However, a systematic review by BMC Medical Education (2024) highlighted that educators often face challenges in acquiring and maintaining digital and instructional skills necessary for effective blended learning. The lack of experience in developing pedagogical content for learning management systems and creating engaging online content were significant barriers identified. In the Philippine context, the study by Alon and Ventayen (2021) found that while students were generally satisfied with blended learning during the pandemic, technological limitations and inconsistent teacher engagement affected learning outcomes. This literature collectively points to a complex relationship between satisfaction and academic success in blended settings—one that is shaped by contextual, pedagogical, and technological variables.

This study is anchored in the Complex Adaptive Blended Learning System (CABLS) framework introduced by Wang, Han, and Yang (2015), which conceptualizes blended learning environments as dynamic and interconnected systems composed of multiple interacting elements. CABLS identifies six core components that influence the success of blended learning: the learner, the teacher, the content, the technology, the learning support, and the institution. These components do not operate in isolation; rather, they interact continuously and adaptively in response to internal and external changes. This theory underscores the idea that satisfaction and academic performance in blended learning emerge from the complex interplay between these elements. In the context of this study, CABLS provides a holistic lens to examine how factors such as instructor presence, learner interaction, course content, technological support, and assessment practices contribute to students' satisfaction and how that satisfaction may or may not relate to their academic performance. By grounding the study in the CABLS framework, we acknowledge the multifaceted and adaptive nature of blended learning, thereby offering a more nuanced interpretation of how educational, technological, and institutional elements collectively shape student outcomes.

The significance of this study lies in its potential to inform the design of more effective and student-centered blended learning experiences in the hospitality and tourism education sectors. Given that these programs rely heavily on practical, interpersonal, and communicative skills, understanding how blended learning can be optimized to meet students' needs is critical for producing industry-ready graduates. Furthermore, the study addresses a research gap by investigating the connection between satisfaction and academic outcomes in a specific context—STHM students at Colegio de San Juan de Letran Calamba—providing valuable insights for both institutional policymakers and educational practitioners. The results may serve as a basis for further enhancement of blended learning practices not only within the institution but across similar higher education contexts in the country and beyond.

Objectives of the Study

The general objective of this study is to assess the satisfaction of students in blended learning and examine its relationship to academic performance among students in the School of Tourism and Hospitality Management (STHM) at Colegio de San Juan de Letran Calamba.

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Specifically, the study aims to:

1. Determine the satisfaction level of students in blended learning in terms of:
   - Instructor Presence
   - Learner–Learner Interaction
   - Course Content
   - Technological Support
   - Course Assessment
2. Examine the significant relationship between satisfaction in blended learning and academic performance.
3. Identify significant differences in student satisfaction when grouped according to demographic variables such as year level, geographic location, type of internet connection, and mobile device used.
4. Propose learning design recommendations based on the findings to improve blended learning experiences for STHM students.

METHODS

Research Design

This study employed a descriptive-correlational research design to determine the satisfaction levels of students with blended learning and examine its relationship with their academic performance. Descriptive research was used to quantify the degree of student satisfaction across several dimensions, while correlational research was applied to identify the nature and strength of relationships between these satisfaction variables and students' academic performance. The descriptive aspect captured how students perceive key elements of blended learning, including instructor presence, learner–learner interaction, course content, technological support, and course assessment. Meanwhile, the correlational component investigated whether these perceptions have a measurable connection to academic success. This design was deemed most appropriate because it does not involve manipulation of variables but rather observes existing conditions, behaviors, and relationships among variables (Creswell & Creswell, 2018).

Respondents and Sampling

The respondents of this study were students from the BS Hospitality Management and BS Tourism Management programs at the School of Tourism and Hospitality Management (STHM) of Colegio de San Juan de Letran Calamba. The participants were selected from second year to fourth-year levels, enrolled in the second semester of Academic Year 2023–2024. The initial population size was 103 students, from which 53 students participated voluntarily in the study. While the sample size represented only 51.5% of the population, it was considered acceptable for a non-probability sampling approach, especially in small academic settings.

The sampling technique used was purposive sampling, targeting students who had experienced blended learning and could meaningfully reflect on their satisfaction and academic performance. Although the respondents were not randomly selected, their participation was based on relevance to the study's criteria—i.e., exposure to blended learning platforms, familiarity with instructors' engagement practices, and completion of at least one semester under the blended modality.

Data Gathering Instrument

Data were collected using a self-constructed and validated questionnaire that measured student satisfaction across five core variables: Instructor Presence, Learner–Learner Interaction, Course Content, Technological Support, and Course Assessment. The questionnaire items were designed based on existing literature on blended learning effectiveness and the Complex Adaptive Blended Learning System (CABLS) framework. Each item used a 5-point Likert scale, ranging from 1 ("Highly Dissatisfied") to 5 ("Highly Satisfied").

The instrument underwent a rigorous validation process. First, it was subjected to content validation by a panel of experts, including professionals in education, statistics, and tourism and hospitality management. Minor revisions were made based on their recommendations to improve clarity and relevance. Second, pilot testing was conducted with 30 participants from a different academic program within the same institution to evaluate

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the instrument's reliability and internal consistency. The Cronbach's alpha coefficient for each variable exceeded 0.87, indicating a high level of reliability: Instructor Presence (0.887), Learner–Learner Interaction (0.921), Course Content (0.908), Technological Support (0.875), and Course Assessment (0.901).

Data Gathering Procedure

Data collection was conducted over two weeks in April 2024. The questionnaire was distributed online using Google Forms, with the link sent through institutional email and learning management systems. Prior to completing the survey, students were provided with a consent form detailing the purpose of the study, the voluntary nature of participation, and the confidentiality of responses. Respondents were instructed to answer the questionnaire honestly and based on their actual experiences with blended learning. The academic performance data were self-reported by the students through an item asking for their general weighted average (GWA) during the semester.

Data Analysis

The data were analyzed using non-parametric statistical methods, appropriate for the study given the non-random sampling technique and the ordinal nature of the Likert-scale responses. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to determine the levels of satisfaction for each variable. To test for relationships between student satisfaction and academic performance, Spearman's Rank Correlation Coefficient (Spearman's rho) was employed, as it does not assume a normal distribution and is suitable for small sample sizes. Furthermore, group comparisons based on year level, geographic location, internet connection, and device used were analyzed using Kruskal-Wallis and Mann-Whitney U tests. The significance level was set at $p < 0.05$ for all inferential tests.

Ethical Considerations

Ethical integrity was a core aspect of this research. The study followed ethical guidelines for conducting educational research as set by the institution's research ethics committee. All participants were informed of their rights through an informed consent form and were assured of the confidentiality and anonymity of their responses. Participation was entirely voluntary, and no incentives were provided that might influence participation. Data were stored securely and used strictly for academic purposes. The researchers also ensured that no identifying information was collected in the questionnaire, and only aggregated results were reported.

RESULTS AND DISCUSSION

This study aimed to assess student satisfaction with blended learning and explore its relationship to academic performance among BS Hospitality Management and BS Tourism Management students at Colegio de San Juan de Letran Calamba. Non-parametric tests were utilized to determine both the level of satisfaction and any correlations or significant differences based on demographic variables. Overall, the results revealed moderately high levels of student satisfaction across the five key dimensions: Instructor's Presence, Learner–Learner Interaction, Course Content, Technological Support, and Course Assessment.

Table 1. Summary of Respondents' Satisfaction in Blended Learning

SATISFACTIONS OF STHM STUDENTS IN TERMS OF:	COMPOSITE MEAN	INTERPRETATION
1. Teacher Presence	4.29	Satisfied
2. Learner – Learner Interaction	4.11	Satisfied
3. Course Content	4.21	Satisfied
4. Technological Support	4.23	Satisfied
5. Course Assessment	4.23	Satisfied

*4.51-5 = highly satisfied, 3.51-4.5 =satisfied, 2.51-3.5= moderately satisfied, 1.51-2.5=dissatisfied, 1.00-1.5= highly dissatisfied.

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Contrary to expectations, the findings showed that satisfaction with blended learning was not significantly correlated with academic performance when viewed through a general lens. Using Spearman's Rho, the relationship between academic achievement and overall satisfaction scores across the five constructs did not reach statistical significance. However, when each item within the constructs was analyzed individually, specific negative correlations were found. For instance, the item "My relationships with my instructors develop close ties and greater motivations that make me succeed to finish all my academic requirements" under Instructor's Presence showed a negative correlation with academic performance (r = -0.326). This suggests that while students may appreciate close interpersonal connections with instructors, these relationships do not necessarily translate to higher academic outcomes and may even, in some cases, foster overdependence rather than autonomous learning.

Similarly, the item "Blended learning allows me to fulfill my other obligations and personal commitments" under Technological Support was negatively correlated (r = -0.334) with academic performance. This may reflect that while flexibility is appreciated, it could also lead to divided attention and time management challenges, affecting academic outcomes. This result supports the findings of Singh and Thurman (2019), who emphasized that flexibility in online learning may lead to decreased academic engagement if not properly managed.

Table 2. Relationship between Student Satisfaction and Academic Performance

Variables	**Rho-value**	**Interpretation**
Instructor's Presence	-0.109	Not Significant
Learner – learner Interaction	-0.063	Not Significant
Course Content	-0.048	Not Significant
Technological Support	-0.103	Not Significant
Course Assessment	-0.186	Not Significant
*. Correlation is significant at the 0.01 level (2-tailed).		

These nuanced findings highlight the complex dynamics of satisfaction and performance within blended learning, consistent with the theoretical underpinning of the Complex Adaptive Blended Learning System (CABLS) model by Wang et al. (2021). CABLS emphasizes that learning outcomes in blended settings are shaped by the interplay of multiple agents—students, teachers, institutional support, technology, and content design—acting in adaptive and sometimes unpredictable ways.

While many studies such as Alammary (2019) and Martin and Bolliger (2018) have supported the positive relationship between student satisfaction and performance in blended environments, this study aligns with more recent investigations like that of Mohammadi and Asadzandi (2022), which found that satisfaction with online features does not always predict academic achievement. On the contrary, academic performance is often influenced by factors such as self-regulation, intrinsic motivation, and learning strategies, rather than mere satisfaction with technological or instructional inputs.

Additionally, although no significant overall differences were found when comparing satisfaction levels by year level, device used, or type of internet connection, some item-level analyses did reveal noteworthy variations. For example, second-year students reported significantly higher satisfaction (p = 0.047) on the item "I see a lot of efforts from my teachers and classmates on their willingness to give emotional support…" compared to fourth-year students. This could be attributed to the differing expectations and maturity levels among year levels, with younger students valuing interpersonal support more prominently. In contrast, fourth-year students scored significantly higher (p = 0.047) on the item "I feel the real classroom since I could communicate effectively with my teachers and classmates…" suggesting that they have better adapted to the virtual setting and established routines.

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Table 3. Differences when grouped according to Year Level

Variable	p-value	Interpretation
Instructor's Presence	0.202	No significant difference
Learner- Learner Interaction	0.134	No significant difference
Course Content	0.326	No significant difference
Technological Support	0.148	No significant difference
Course Assessment	0.262	No significant difference

*. The significant at the 0.050 level (Independent-Samples Kruskal-Wallis Test).

Geographic location also revealed significant differences in the item "The instructors frequently use the mobile technology and applications during classes, and they enhance my learning," with students outside Laguna reporting lower satisfaction ($p = 0.044$). This could indicate disparities in mobile application usage and digital pedagogy depending on instructor-student proximity or regional infrastructure differences. A similar digital divide has been reported in the study by Bao et al. (2020), who found that geographic and socioeconomic factors influenced students' engagement with digital learning tools during the pandemic.

Table 4. Differences when grouped according to Geographic Location

Variable	p-value	Interpretation
Instructor's Presence	0.305	No significant difference
Learner- Learner Interaction	0.427	No significant difference
Course Content	0.383	No significant difference
Technological Support	0.405	No significant difference
Course Assessment	0.405	No significant difference

*. The significant at the 0.050 level (Independent-Samples Mann-Whitney UTest).

The results of this study emphasize the importance of refining assessment methods rather than solely focusing on enhancing satisfaction dimensions like instructor presence or technological tools. Based on the findings, a proposed learning design should incorporate diversified and authentic assessment strategies tailored to different student needs and learning contexts. For instance, balanced use of formative and summative assessments, personalized outputs such as video presentations or infographics, and continuous feedback mechanisms can ensure that learning is meaningful, engaging, and performance driven.

In summary, while satisfaction with blended learning remains moderately high, its impact on academic performance appears limited and complex. Educational institutions must consider shifting their improvement efforts toward assessment strategy redesign, learner autonomy cultivation, and targeted digital infrastructure support to enhance not just satisfaction, but measurable academic success.

CONCLUSION

The findings of this study provide a nuanced understanding of how students in the School of Tourism and Hospitality Management at Colegio de San Juan de Letran Calamba perceive their satisfaction with blended learning and how this satisfaction interacts with their academic performance. While the study did not establish a direct relationship between overall satisfaction levels and academic achievement, its implications are nevertheless significant in guiding institutional strategies, instructional design, and student support services.

First, the analysis of satisfaction across dimensions—Instructor Presence, Learner–Learner Interaction, Course Content, Technological Support, and Course Assessment—implies that students value these elements in shaping their learning experience. However, the absence of a clear connection to academic performance indicates that satisfaction alone may not be a reliable predictor of academic success. This calls for a deeper examination of internal student factors such as self-regulation, time management, and learning strategies which may act as mediators between satisfaction and academic outcomes.

Grounded in the Complex Adaptive Blended Learning System (CABLS) framework, the study underscores the importance of viewing blended learning not as a linear cause-effect system but as a dynamic and adaptive process. The CABLS theory, with its emphasis on the interconnectedness of learners, teachers, content, technology, and context, allows for a more holistic interpretation of why certain pedagogical features succeed or fail in achieving academic impact. This perspective reveals that while high satisfaction may reflect quality instructional design and student engagement, academic success requires a broader ecosystem of cognitive and affective supports.

Moreover, the differentiated responses across year levels, devices, and geographic contexts suggest that learner satisfaction is shaped by highly individualized and contextualized experiences. These variations support the idea that personalized and flexible instructional approaches are essential in diverse learning environments. Institutions must therefore commit to responsive teaching models that adapt to student feedback and evolving digital competencies.

In terms of theoretical contribution, this study advances the field by empirically testing the CABLS model in a localized setting and by illustrating how its principles can explain the fragmented links between satisfaction and performance. It offers practical insights for tourism and hospitality education—a field increasingly dependent on experiential, technology-integrated learning. The proposed directions for pedagogical redesign, especially in assessment and digital engagement, contribute to the growing body of work advocating for learner-centered and adaptive blended learning environments.

Ultimately, this research highlights the need to rethink how success in blended learning is conceptualized and measured. It shifts the conversation from satisfaction as an end goal to satisfaction as one of many interdependent factors that inform a richer, more adaptive educational environment. In doing so, it contributes meaningfully to the discourse on quality assurance and continuous improvement in higher education, especially in post-pandemic learning contexts.

RECOMMENDATIONS

1. Enhance faculty development programs focused on improving instructor presence, particularly in fostering motivation and engagement in blended learning environments.
2. Strengthen peer collaboration strategies by designing structured learner–learner interaction activities that promote group work and emotional support.
3. Review and refine course content delivery to ensure clarity, accessibility, and alignment with the students' diverse learning needs and technology access.
4. Invest in reliable and inclusive technological infrastructure that supports blended learning, with emphasis on mobile device compatibility and connectivity support.
5. Improve course assessment strategies to be more flexible, responsive, and student-centered, especially in cases where learners face legitimate challenges in meeting deadlines.
6. Adopt adaptive learning designs guided by the Complex Adaptive Blended Learning System (CABLS) to reflect the dynamic interaction between students, instructors, technology, and content.
7. Regularly evaluate student satisfaction with blended learning using validated instruments to inform instructional practices and policy development.
8. Provide targeted support services to students with limited internet access or lower-performing devices to ensure equity in blended learning experiences.

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