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Satisfaction and Academic Achievement in Blended Learning Modality: Insights from CoViD-19 Era

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Abstract

SATISFACTION AND ACADEMIC ACHIEVEMENT IN BLENDED LEARNING MODALITY: INSIGHTS FROM COVID-19 ERA by Lia Jean D. Castro, Master of Arts in Teaching, Major on Social Studies, Valencia Colleges Inc. Valencia City, Bukidnon, Philippines, July 2022.

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This study sought to determine the level of satisfaction in blended learning modalities based on student engagement, content and educational materials, technology, feedback, evaluation, and flexibility; the relationship between the level of satisfaction in blended learning modalities and academic achievement of the Criminology Students; and the significant difference between the student's satisfaction and academic achievement in blended learning modalities during the period of CoViD-19 when they are grouped according to their demographic profile. It was conducted in Don Carlos Polytechnic College, located at Purok 2, Norte, Don Carlos, Bukidnon. The respondents were the bona fide first-year students of Don Carlos Polytechnic College, enrolled in Bachelor of Science in Criminology program for the Academic Year 2021-2022. It used a self-made research questionnaire. The data were treated with the descriptive statistics such as frequency count, percentage, mean, standard deviation; Pearson r Product Moment Correlation Coefficient; and ANOVA or Analysis of Variance.

The study found that most of the respondents are under 20 years old, with family incomes ranging from ₱1,000.00 to ₱5,000.00 per month. The majority of respondents are female, single, and have earned final average grades of 1.50–1.75 in the previous semester in the GE 102 course. Overall, the students expressed a high level of satisfaction with the blended learning modality, particularly in areas such as student engagement, educational materials, technology, feedback, and flexibility. The study also showed a strong connection between the students' satisfaction with blended learning and their academic performance, indicating that satisfaction contributed to improvements in their academic achievement. As a result, the first null hypothesis was rejected. Furthermore, when the students were grouped by age, a significant difference in their satisfaction levels was observed. The same was true when looking at the relationship between students' academic achievement and satisfaction based on their demographic profile, leading to the rejection of the second null hypothesis.

The study recommends that students actively engage in understanding the factors affecting their learning in blended environments, seeking support for technology access, time management, and communication with teachers. Schools should use the findings to improve their strategies, ensuring resources like devices and internet access, and providing teacher training. Teachers are advised to adopt flexible methods, check in on student progress, and offer personalized feedback. Local government units (LGUs) should invest in

technology and infrastructure, collaborate with schools for training, and ensure students, particularly in rural areas, have the necessary tools. Parents should create a supportive study environment, manage time, and stay informed about blended learning. NGOs should advocate for better educational policies and resource distribution, particularly in underserved areas. Future researchers should explore the long-term effects of blended learning, considering factors like age, income, and the role of teachers and community support in student success.

Keywords: Academic Achievement, Satisfaction, Blended Learning Modality

Chapter 1
The Problem
Introduction

The COVID-19 pandemic reshaped education systems worldwide, pushing institutions to adopt innovative strategies to ensure learning continuity despite widespread disruptions. One of the most prominent approaches that emerged during this time was blended learning, which integrates face-to-face instruction with online components. This modality offered flexibility and accessibility, making it a practical solution to the challenges posed by the pandemic. However, the rapid transition to blended learning raised questions about its effectiveness in meeting students' needs and its impact on academic achievement.

In the Philippines, the shift to blended learning highlighted the diverse circumstances of students, including differences in age, gender, marital status, family income, and access to technology. These factors significantly influence students' satisfaction with their learning experience and their ability to succeed academically. Understanding how these factors work together is key to creating blended learning strategies that are both inclusive and effective, especially that building resilience in education is vital (Samaras, 2020).

The advent of new technologies has significantly transformed the learning landscape in higher education, providing students with more flexible and accessible learning opportunities. The integration of digital tools and platforms into the educational process has led to the widespread adoption of online learning, especially during the COVID-19 pandemic. In response to these changes, blended learning, which combines in-person and online instruction, has become a popular and effective mode of delivery in many educational institutions. This approach allows for a more flexible and personalized learning experience, addressing diverse student needs and preferences. Some scholars have referred to blended learning as the "new traditional model" or the "new normal" in course delivery, reflecting its increasing prevalence in modern education (Norberg et al., 2011). As universities and colleges continue to adapt to the evolving demands of higher education, the use of blended learning and online delivery has become essential in maintaining educational continuity and ensuring that students have access to quality learning experiences despite external challenges (Zeqiri & Alserhan, 2020).

Numerous scholars have explored the impact of blended learning on students' satisfaction and its subsequent effect on academic achievement. According to Melton et al. (2009), students generally prefer blended learning over traditional methods, as it offers a more flexible and engaging learning experience. However, other research presents a contrasting view, suggesting that not all students find blended learning advantageous. For instance, a study by Graham (2006) highlighted that some students may struggle with the self-regulation required in blended learning environments, leading to lower levels of satisfaction and academic performance. Similarly, a study by Snelson (2016) found that while some students appreciate

the flexibility of blended learning, others report feeling overwhelmed by the increased responsibility for managing their learning independently. These contrasting perspectives emphasize that while blended learning offers benefits, its effectiveness depends on various factors, including students' learning preferences and their ability to adapt to this mode of instruction effectively.

While blended learning has emerged as a key solution to the educational challenges brought about by the COVID-19 pandemic, its effectiveness remains a topic of debate. The integration of face-to-face and online learning components offers flexibility and accessibility, but its success is influenced by various factors, including students' self-regulation skills and their ability to manage independent learning. Additionally, the demographic characteristics of students, such as age, gender, marital status, family income, and access to technology, play a significant role in shaping their satisfaction with blended learning and, consequently, their academic performance. Despite the growing body of research on blended learning, there remains a gap in understanding how these demographic factors specifically affect students' satisfaction and academic achievement in the context of the pandemic.

The objective of this study is to address this gap by examining the demographic profile of students and their level of satisfaction with blended learning modalities, specifically focusing on student engagement, content and educational materials, technology, feedback, evaluation, and flexibility. Furthermore, this study aims to explore whether there is a significant relationship between students' satisfaction with blended learning and their academic achievement. It would also examine whether demographic factors such as age, gender, marital status, family income, and grade point average in GE 102 have a significant impact on students' satisfaction and academic achievement in blended learning during the COVID-19. By understanding these factors, this research aims to provide insights that could help educational institutions develop more effective and inclusive blended learning strategies that cater to the diverse needs of students.

Conceptual Framework of the Study

This study is anchored on the Complex Adaptive Blended Learning System theory (Wang et al., 2015). To "facilitate a deeper, more precise understanding of the dynamic and adaptive nature of blended learning," the CABLS framework was created. It is perhaps not an exaggeration to say that the term "blended learning" has become ingrained in the language because it has been used frequently in tertiary education for well over a decade. Blended learning has been gaining importance, especially during the last 5 years, with the development of online learning and the emergence of the COVID-19 pandemic. In CABLS, the student sits at the center of the model, but all components impact each other. The system consists of six components, each of which has a separate sub-system. These six elements are the student, the teacher, the technology, the content, the learning support, and the institution. Each component interacts with the others and has its character and subsystem in addition to having its own identity. As in any complex system, the linkages are dynamic and integrative. This adaptive blended learning system develops from the interactions and results of each element acting on and concerning the other elements.

This study is also anchored on the Eight Dimensions of the E-learning Framework (Khan, 2007). What is required to offer students all over the world the greatest and most meaningful open, adaptable, and dispersed learning environments? This is the question that planted the seeds for the E-Learning Framework." The framework comprises eight dimensions: organizational, educational, technological, interface design, assessment, management, resource support, and ethical.

The relationship between the study's independent and dependent variables is depicted in the schematic diagram. The independent variables being investigated are shown in the box on the left: age, gender, marital status, year level, grade point average in the GE 102 course of the previous semester, Economic

Status of Parents, experience with Blended Learning, and the level of student's satisfaction with respect to; student's engagement, content and educational materials, technology, student support, feedback and evaluation, flexibility which can be observed to be correlated with the dependent variable on the right box: the academic achievement of Criminology students in GE 102 course.

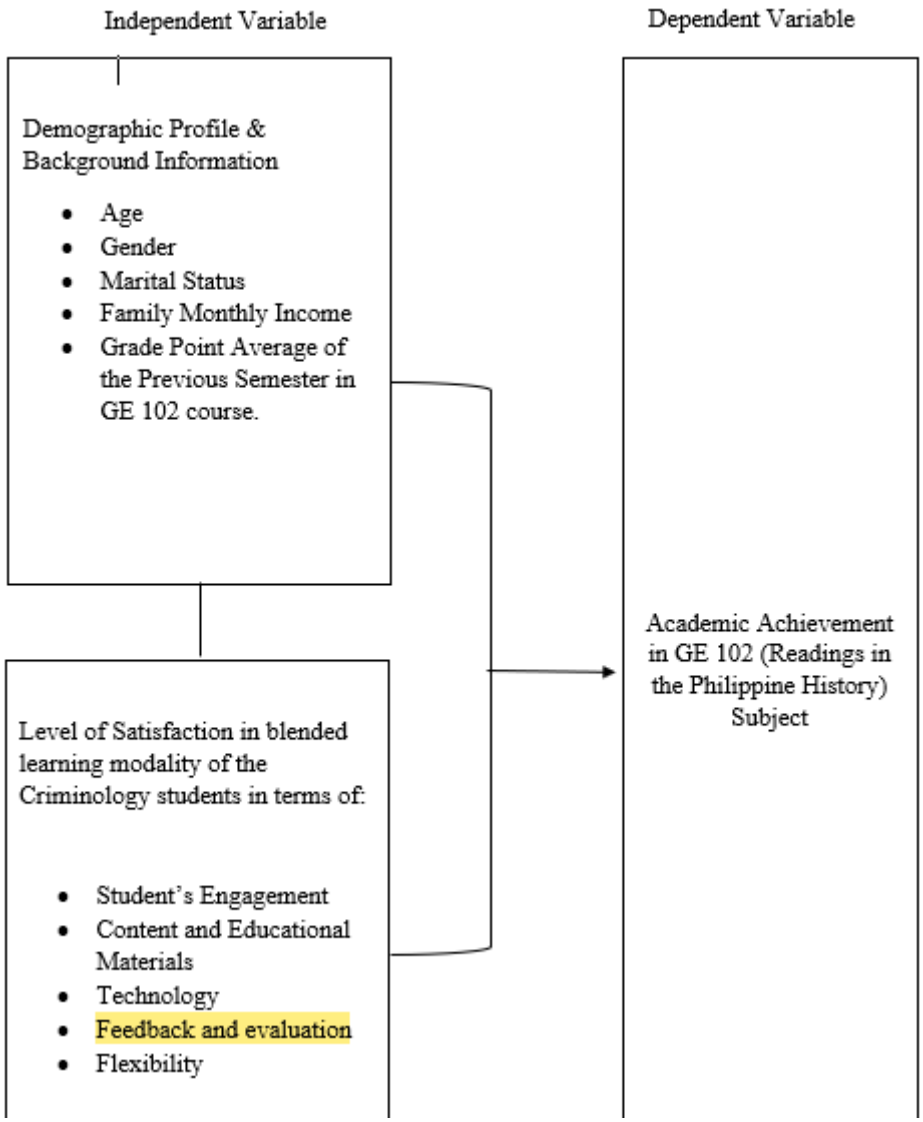

Figure 1. The relationship between the Study's Independent and Dependent Variables is depicted schematically in the diagram.

Statement of the Problem

This study was conducted to find the level of satisfaction in the blended learning modality of Criminology students at Don Carlos Polytechnic College during COVID-19.

Specifically, this study sought to answer the following questions:

1. What is the demographic profile and background information of the respondents in terms of; age, gender, marital status, family monthly income, and grade point average in GE 102 of the previous semester?
2. What is the level of satisfaction with the blended learning modality in terms of; student engagement, content and educational materials, technology, feedback, evaluation, and flexibility?

3. Is there a significant relationship between the level of satisfaction with the blended learning modality and the academic achievement of the respondents?
4. Is there a significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they are grouped according to their demographic profile?

Hypotheses of the Study

The following null hypotheses were tested in this study:

Ho1: There is no significant relationship between the level of satisfaction in the blended learning modality and the academic achievement of the respondents.

Ho2: There is no significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they are grouped according to their demographic profile.

Delimitations of the Study

This research was delimited to finding the level of satisfaction in the blended learning modality based on the academic achievement of criminology students during COVID-19 at Don Carlos Polytechnic College. The respondents of this study were delimited to the first-year Criminology students of Don Carlos Polytechnic College, A.Y. 2021-2022.

Significance of the Study

This study was conducted to provide significance to the following individuals and/or groups:

Students from various schools and colleges would be the primary beneficiaries of this study. It would offer valuable insights into how demographic factors impact their experience and academic achievement in blended learning modality. With this information, students would be better equipped to understand the challenges they face and seek appropriate support, ultimately enhancing their learning outcomes and engagement in the blended learning modality.

Local educational institutions, such as public and private schools and universities in areas like Don Carlos, Bukidnon, would benefit from this study by gaining a better understanding of how to optimize their teaching strategies and resources. The findings would help them adapt their blended learning approaches to meet the specific needs of their students, ensuring that the learning environment is both effective and inclusive. This would also guide institutions in providing adequate support for students, including technological access and academic resources.

Teachers and faculty members would benefit by gaining a deeper understanding of the diverse needs of students in a blended learning setup. This knowledge would allow them to adapt their teaching methods, assessments, and feedback to better cater to the varying circumstances of students. By improving their ability to engage students and address their individual learning challenges, educators can contribute to better academic performance and overall student satisfaction.

Local government units (LGUs), especially those involved in education, would find the findings useful in guiding local education policies and decision-making. They can use the research to better allocate resources for technology, teacher training, and student support services. This would allow LGUs to enhance the educational system and ensure that it responds effectively to the diverse needs of students in their communities, especially in light of the challenges posed by the pandemic.

Parents and guardians, particularly those in rural and underserved areas, would gain valuable insights from this study into the factors that affect their children's academic achievement in blended learning. With this understanding, they would be better positioned to offer targeted support at home, such as helping their children adapt and understand online learning platforms, and manage their time.

Education-focused non-government organizations (NGOs) and community-based groups would find the study beneficial in advancing their advocacy for educational reforms. The research findings could inform their efforts to support local schools and communities in enhancing the quality and inclusivity of education, particularly in adapting to the blended learning modality. These organizations can use the results to campaign for more effective educational policies and resource distribution, ensuring that all students have access to quality learning experiences.

Finally, future researchers would benefit from this study by using it as a foundation for further exploration into the effectiveness of blended learning at the local level. This study would provide a valuable starting point for investigating additional variables, such as teacher preparedness or long-term impacts on student outcomes. Future studies could also build on these findings to explore how blended learning can be further improved or adapted to meet the needs of students in different regions or educational settings.

Definition of Terms

The following terms were conceptually or operationally defined for better understanding between the researcher and the readers; as follows.

Blended learning. Blended learning is an instructional delivery approach that combines traditional teaching modes and online teaching methods.

Academic Achievement. Academic achievement refers to the Final Average of the respondents in GE 102 (Readings in the Philippine History) subject.

Content and Educational Materials. Refers to the subject matter and the material elements used to engage the Criminology students in the process of mastering the subject in blended learning.

Feedback and Evaluation. Feedback and evaluation refer to the learning assessment given to the Criminology students.

Flexibility. Flexibility refers to the flexibility of the Criminology students' time in learning with a blended learning system.

GE 102. GE 102 refers to the course taken by first-year criminology students with the descriptive title: "Readings in the Philippine History".

Satisfaction. Refers to how satisfied students are with blended learning.

Students Engagement. Student engagement refers to the engagement of Criminology students in learning with a blended learning system.

Technology. Refers to the technological devices used by the Criminology students in supporting learning such as; smartphones, internet connectivity, computer, and laptop.

Chapter 2
Review of Related Literature and Studies

The studies and literature that the researcher studied and found to have pertinent and significant reviews that might support or contradict the study's conclusions are presented in this part. The arrangement of the literary works is similar to how the Chapter 1 variables were presented.

Technology has been advancing rapidly in recent years, and the increasing availability of information has made education more important than ever. The COVID-19 pandemic has had a significant impact on global education, forcing institutions to quickly adapt to new methods of teaching. According to the United Nations (2020), 94% of students in over 200 countries were affected, with 1.58 billion students from preschool to higher education experiencing disruptions. This forced shift highlighted the urgency for schools to embrace the information age in order to meet the evolving demands of students' learning needs. This adjustment is now vital for the survival and continued growth of educational institutions (Bani Hamad, 2011).

In this information-driven era, acquiring the right information at the right time has become essential, not only for students but for society at large. As education undergoes a transformation, it is crucial to adopt strategies that leverage contemporary information and communication technologies to promote deeper exploration of learning. Teaching methods relevant to the 21st century must be reimagined to effectively serve the needs of universities and colleges (Laurillard, 2022). Academic management and faculty members have long been exploring new course delivery methods in an effort to stay aligned with the changing educational landscape (Hamilton & Tee, 2010).

One of the most promising educational trends in this context is blended learning, which integrates face-to-face and online learning experiences. Though higher education institutions have only recently begun incorporating blended learning, it is quickly becoming a key tool for providing global learning opportunities (Arbaugh, 2014). Blended learning is an educational strategy that combines traditional in-person instruction with online learning, allowing for a flexible and high-quality learning experience (Freihat, 2004; Al-Rimawi, 2016). This combination of delivery methods helps to maximize the benefits of both face-to-face and online education.

Within a blended learning environment, two key outcomes—student achievement and satisfaction—are regarded as crucial indicators of educational quality (Betoret, 2017). Course satisfaction, in particular, is essential as it influences students' decisions to enroll in or drop courses (Levy, 2007). Furthermore, satisfaction is strongly correlated with effective learning (Sinclaire, 2014). Recent studies have highlighted that while factors such as subject value play a significant role in a student's engagement and persistence, satisfaction itself is a primary factor influencing academic achievement (Nagengast et al., 2011; Gasco & Villarroel, 2014; Guo et al., 2015). In this context, task value and grade expectations are also important predictors of satisfaction (Artino, 2008; Diep et al., 2016).

Research has consistently shown that blended learning environments can enhance students' academic achievement. For example, Usta and Mahiroglu (2015) found that students in blended learning settings performed better academically than those in traditional learning environments. While demographic factors do play a role in student achievement, the most significant predictor of academic success is the grades earned in core knowledge areas (Kaighobadi & Allen, 2008).

Blended learning has been recognized as an effective method for improving academic performance. According to Hassan (2010), this instructional approach supports students in achieving desired learning outcomes by combining both traditional and electronic learning methods, thus encompassing in-class and out-of-class learning experiences. The dynamic nature of blended learning adopts greater student engagement, which in turn can increase satisfaction with courses (Gulsecen et al., 2005). Moreover, by

encouraging reflective thinking, blended learning helps to further enhance students' learning capabilities (Cooner, 2010). The flexibility provided by the combination of face-to-face and online learning environments allows students to manage their time and learning pace more effectively, increasing their level of autonomy in the learning process (Owston et al., 2013). However, it is important to acknowledge that not all students may benefit equally from this type of learning, and it may not meet the needs of every individual learner (Hughes, 2017).

Student's Engagement

Student engagement refers to the level of attention, effort, involvement, curiosity, interest, and motivation that students demonstrate during their learning process (Reschly & Christenson, 2012). It goes beyond mere participation or activity, encompassing both emotional connection and cognitive understanding (Trowler, 2010). Understanding student engagement is crucial for higher education institutions, especially in today's competitive academic landscape. By measuring and enhancing engagement, institutions can not only improve student retention but also attract new students (Trowler, 2010). Blended learning, in particular, has been shown to encourage students to engage more actively in their education (Wang et al., 2009). A key feature of blended learning is that it conceptualizes learning as an ongoing process rather than a one-time event, prompting students to remain engaged even outside the classroom (Borba, 2017).

Building strong student engagement in both in-person and online settings is essential for the effective delivery of blended learning, as engagement is a prerequisite for successful learning (Halverson & Charles, 2019). However, strategies for encouraging engagement differ significantly across these settings, which makes it challenging to maintain student interest in technology-assisted learning environments (Henrie et al., 2015). As a result, student engagement has become a focal point of research in the context of blended learning and learning technologies (Bergdahl et al., 2019; Ryan & Deci, 2020). Offering a variety of content types and engaging subjects can encourage students to interact more with the material and become more actively involved in blended learning (Shearer, 2003).

Another important aspect is student involvement time, which refers to the amount of time students dedicate to completing academic tasks. When students engage in the blended learning process, they not only gain confidence in applying course concepts but also take personal ownership of their learning experience by sharing their thoughts and experiences (Young, 2002). This level of involvement can increase when students are given the opportunity to elaborate on classroom discussions and explore concepts further in the online environment (Smart & Cappel, 2006). Research has shown that the use of blended learning enhances students' involvement in their learning activities (Naziman et al., 2019).

Student engagement has a profound impact on learning outcomes and academic achievement in higher education (Kahu, 2013). For example, Aspen and Helm (2004) found that students could maintain meaningful connections with their peers and educational institutions through online communication in a blended learning environment, even when studying off-campus. Blended learning also stand-ins social interaction, confidence, and self-awareness among students. It encourages collaboration with peers, discussions about course materials, and deeper engagement with the content, ultimately leading to a more positive learning experience (Kumar, 2009; Richardson & Ice, 2010; Chan et al., 2021). This sense of community and collaboration makes the learning process more engaging and stimulating (Kumar, 2015).

However, some students, particularly those who struggle with traditional face-to-face learning, find it difficult to adjust to the demands of blended learning programs. Moreover, Perez and Riveros (2014) observed that while blended learning generally promotes students' autonomy and responsibility for their learning, not all students actively participate in online activities or complete assignments on time. This

lack of engagement in the online components of blended learning is a common critique from educators, highlighting the challenges that some students face in fully embracing this mode of instruction.

Content and Educational Materials

Prosser and Barrie (2007) argued that utilizing a variety of teaching and learning methods allows students to develop a deeper understanding of the subject matter, adopts positive perceptions of the instruction they receive, clarifies goals and expectations, and provides greater independence during the learning process. Well-organized and clearly presented course information, especially when delivered in a collaborative and visible manner, has the most significant impact on student learning (Ozkan & Koseler, 2009). Blended learning, in particular, offers students access to global course resources and materials, which enhances the quality of instruction provided by instructors (Al-Shami et al., 2018). The way teaching methods are organized and implemented to promote learning is largely influenced by curriculum design (Hussin et al., 2009). This is because students highly value well-organized, high-quality curriculum content, which improves instructional effectiveness when presented in a clear, engaging, and easily understandable format (Ozkan & Koseler, 2009).

When developing a blended learning solution, it is essential that learning objectives remain a priority (Holden & Westfall, 2010). Course content refers to all written and digital resources used by instructors to facilitate learning in alternative formats (Hussin et al., 2009). This includes the instructional strategies and interactive materials employed by instructors to support students' learning experiences (Ho, 2020). Research by Mondi (2007) and Wong et al. (2018) indicates that interactive course materials in blended learning can motivate students to engage more actively with the content. Additionally, Ozkan and Koseler (2009) and Deng et al. (2018) emphasized the importance of providing up-to-date course content, such as displaying student grades, timely announcements, past exam questions, and marking criteria, as these factors significantly contribute to students' satisfaction with the curriculum.

Savara and Parahoo (2018) and Deng et al. (2018) argued that an appropriately structured course, which includes both online and offline modes of delivery, along with a clear course schedule and defined objectives for course activities, can improve students' academic performance. However, Chen et al. (2010) and Sanders (2006) cautioned that the natural interactions and physical presence of a classroom cannot be fully replicated in an online environment. Furthermore, Clauburg (2004) pointed out that a student's ability to learn is closely tied to their capacity to conduct research using the materials provided by the instructor. To ensure effective teaching and learning, it is crucial that the online course materials are carefully selected and thoughtfully designed (Yusoff et al., 2017).

Technology

With a blended learning model, students have the flexibility to study for exams and participate in class discussions online from any location with internet access, allowing them to work from home (Kenney, 2011). Technology plays a crucial role in supporting the interaction between professors and students. It includes physical hardware, internet connectivity, and the necessary software tools (Garrison & Kanuka, 2004). Lecturers can utilize various interactive tools and systems, such as multimedia applications, to facilitate the teaching and learning process (Fleck et al., 2014). These tools not only enable instructors to upload course materials but also enhance their ability to communicate knowledge effectively (Edward et al., 2018). As a result, the ethical and effective use of technology by lecturers is essential for blended learning to achieve its potential benefits for both teaching and learning (Bowyer & Chambers, 2017).

Research by Venkatesh et al. (2016) and Wu et al. (2010) has shown that students' perceptions of the effectiveness of their computers can influence their level of satisfaction and academic success. Additionally, Hu and Hui (2012) highlighted that students with low computer self-efficacy may be disadvantaged in technology-mediated learning environments, as they tend to engage less in online activities compared to their peers with higher self-efficacy. Similarly, Johnson et al. (2008) and Chen et al. (2010) noted that technology-mediated learning cannot fully address all of students' challenges and may not be suitable for all student populations. A student's performance and academic achievement in an online setting, therefore, depend heavily on their prior experiences, personality, and personal circumstances. For students who are not adequately prepared, online learning can present significant challenges in terms of engagement and course completion.

Several studies have focused on the technological components of blended learning and their impact on student satisfaction and retention (Chao et al., 2013; Melendez et al., 2013). Notably, Graham and Osguthorpe (2003) and Singh (2017) found that blended learning provides greater opportunities for students to understand and expand on the knowledge presented, especially in large classes. The development of technology has allowed higher education institutions to enhance their competitiveness by offering an alternative method for delivering higher-quality education.

Piccoli et al. (2001) emphasized that satisfaction with online learning is heavily influenced by the quality of the technology used, particularly internet connectivity. Furthermore, substantial learning outcomes are more likely when information technology is of high quality and reliability. Othman and Musa (2012) pointed out that the dependability and speed of college internet access are equally important factors in the online learning experience. As a result, students who are familiar with IT tools tend to engage more effectively with the technological platforms used in blended learning (Kvavik & Caruso, 2005).

To fully leverage the transformative power of technology in higher education, it is essential to identify and enhance learning opportunities while maintaining the human touch in the educational process (Holsapple & Lee-Post, 2006). Given that blended learning combines the benefits of both in-person and online instruction, it holds significant potential in addressing this challenge, offering a well-rounded approach to modern education (Garrison & Kanuka, 2004).

Feedback and Evaluation

Assessment is a significant, systematic method for evaluating students' understanding (Koohang, 2011; Mustapa et al., 2015). Feedback, an essential component of this process, often includes open- or closed-ended suggestions, such as ratings, comments, or opinions based on student performance or lectures delivered by both students and instructors (Padilla-Melendez et al., 2013; Sun & Qui, 2017). Feedback plays a crucial role in promoting students' growth as learners and provides university administration with valuable information for benchmarking, helping to close the gap between actual and expected performance (Selvi & Perumal, 2012). In blended learning environments, feedback and evaluation are instrumental in encouraging students to reflect on their learning and strategies, enabling them to adjust and improve their academic progress (Kintu, 2017).

Moreover, feedback provides instructors with useful insights into how students perceive their teaching methods (Bowyer & Chambers, 2017), allowing them to make necessary adjustments to enhance instructional quality (Liaw, 2008). Bentley et al. (2010) emphasized that collecting student feedback is an essential blended learning strategy for tracking the standards and quality of both teaching and learning. According to Hammond (2020), when students are informed in advance of the assessment goals, the feedback they receive allows them to respond effectively and apply the suggestions provided. Effective

feedback encourages learners to reflect on their learning strategies and progress, ultimately improving their educational outcomes (Ahea et al., 2016).

In the context of blended learning, feedback significantly contributes to improvements in students' performance and academic achievement. By inculcating reflection and adjustments to learning strategies, feedback helps students enhance their progress. Klentiena and Wannasawade (2016) argued that evaluation provides an important tool for gauging students' progress and achievements, guiding them in making decisions and setting personal goals. Additionally, evaluating students' engagement in blended learning offers valuable insights that can help boost their enthusiasm for the learning method, promoting continued engagement and success.

Flexibility

Blended learning significantly enhances learning effectiveness, reduces training time and costs, and provides students with the flexibility to study whenever and wherever they choose. It facilitates live network interviews and discussions, offers updated information tailored to students' needs, and integrates simulations, animations, practical events, exercises, and applications. Aspden and Helm (2004) found that students living far from campus particularly benefited from blended learning, as they could engage with course materials from home before attending classes, making more efficient use of their time on campus. The adaptability of blended learning, combined with the availability of online resources, allows students to learn at their own pace. This approach also enables instructors to tailor the learning process, either by accelerating students' progress or providing more challenging resources as needed. Although seasoned educators may face challenges when shifting from traditional teaching methods, the flexibility and numerous advantages of blended learning offer significant benefits (Jin, 2021). In particular, blended learning places students at the center of the educational process, giving them the freedom to choose what, when, how, and where they learn. This flexibility makes education more accessible and responsive to students' needs (Watson, 2008).

Holsapple and Lee-Post (2006) highlighted that mediated courses, whether fully online or in a hybrid format, provide students with greater freedom to study at their own pace and from any location, facilitating interactions that are not possible in traditional classroom settings. Combining different learning modalities offers additional advantages, such as increased flexibility and reduced costs, particularly when teaching large numbers of students (Woltering et al., 2009).

The flexibility inherent in blended learning benefits students by enabling them to access course materials and work on assignments at their convenience. It supports independent learning by allowing students to complete tasks digitally, receive immediate feedback on incorrect answers, and access video lectures from anywhere, all while learning at their own pace.

Blended learning also nurtures communication and collaboration between students and instructors through social networking platforms. It improves the usability of course materials, reduces in-class time, promotes student-centered learning, and allows for flexible scheduling and learning locations. Furthermore, it encourages self-directed learning and the development of personalized course solutions (Rahman et al., 2015). Mondi et al. (2007) noted that this approach, which allows students to learn at their own pace, leads to improved student performance and academic achievement. As a result, students are more motivated to start their learning journey, study at their convenience, and feel better prepared for the future. However, Kim (2012) observed that student-teacher and peer interactions decreased as a consequence of blended learning.

This research review aims to explore the issues surrounding students' satisfaction with blended learning, focusing on its impact on academic achievement, particularly among criminology students. This is important because students experience varying levels of satisfaction with the blended learning modality, depending on factors such as engagement, content quality, technology, feedback, evaluation, and flexibility. Previous studies have extensively discussed students' satisfaction levels in blended learning environments. Most research suggests that the most successful teaching and learning methods involve employing diverse strategies to maximize knowledge acquisition and skill development. To better understand why some students, feel disengaged or left behind in blended learning environments, further research and testing are needed to uncover the underlying causes of these concerns.

Chapter 3

The Methodology

This chapter covers the research design, research locale, respondents of the study, the sampling procedure, the research instrument, data gathering, scoring procedure, validation and try-out of the instrument, and statistical treatment of data.

Research Design

The descriptive cross-sectional study design was used in this study. With the use of a single moment in time of data collection from individuals, this design examines particular and widespread occurrences. It describes the connection between relevant factors as they exist in a particular population. This strategy worked best for the current study since the researcher wanted to gauge how satisfied Don Carlos Polytechnic College's criminology students were with their blended learning experience based on their academic achievement.

Research Locale

Purok 2, Norte, Don Carlos, Bukidnon is the address of Don Carlos Polytechnic College, where the study was carried out. The college offers a Bachelor of Science in Criminology, a Bachelor of Elementary Education, and a Bachelor of Secondary Education degrees with concentrations in Filipino, English, Science, and Math.

Due to its accessibility, the researcher decided to conduct the study at Don Carlos Polytechnic College. The researcher wants to determine the level of satisfaction in the blended learning modality based on the academic achievement of the criminology students and whether satisfaction leads to academic achievement improvements in their studies during the COVID-19 pandemic.

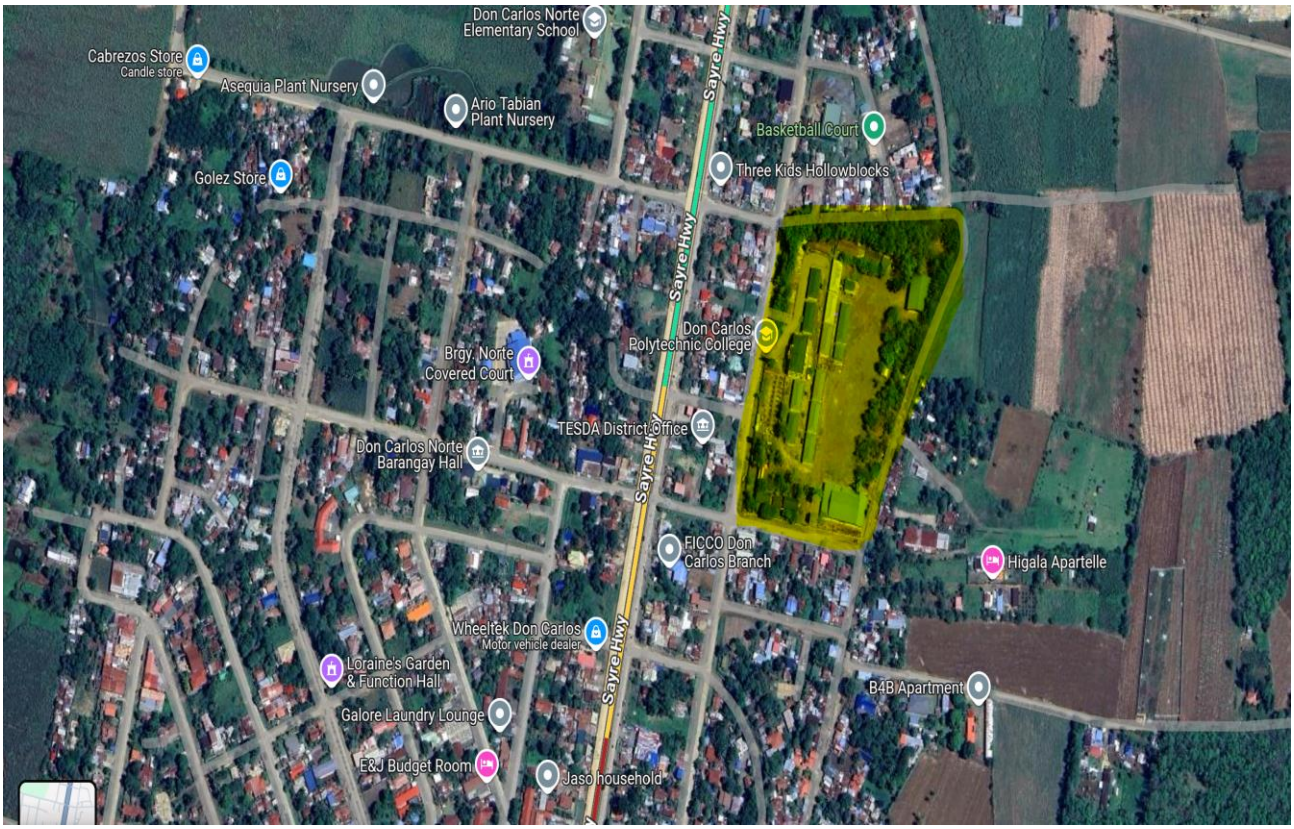

Figure 2. Map showing the Locale of the Study

Respondents of the Study

The 272 genuine first-year students at Don Carlos Polytechnic College (DCPC) who are enrolled in the Bachelor of Science in Criminology program for the academic year 2021–2022 are the respondents to this study.

Sampling Procedure

Stratified random sampling was used in this study. The freshmen population was divided into strata, and people were randomly chosen from each stratum to make up the sample.

$$n = \frac{N}{1 + Ne^2}$$

Figure 3. Yamane's formula for sample size

Where n = sample size, N = population size, e = margin of error

Figure 3 depicts Taro Yamane's formula from 1967. The sample size was calculated by the researcher using this formula, with a 95% confidence level and a 5% margin of error, respectively. The population for this study consisted of 842 first-year Bachelor of Science in Criminology students with 20 sections and using Yamane's method, a sample size of 272 was determined. Table 1 includes a list of all the strata along with the number of participants drawn from each. From the institution's registrar's office, the number of populations was sought.

Table 1 Distribution of Respondents by Section

Strata (sections)	Population	Calculated sample size
BS Criminology 1A	47	15
BS Criminology 1B	43	14
BS Criminology 1C	46	15
BS Criminology 1D	40	13
BS Criminology 1E	39	13
BS Criminology 1F	51	16
BS Criminology 1G	43	14
BS Criminology 1H	44	14
BS Criminology 1I	43	14
BS Criminology 1J	38	12
BS Criminology 1K	47	15
BS Criminology 1L	37	12
BS Criminology 1M	42	14
BS Criminology 1N	51	16
BS Criminology 1O	38	12
BS Criminology 1P	40	13
BS Criminology 1Q	40	13
BS Criminology 1R	52	17
BS Criminology 1S	43	14
BS Criminology 1T	18	6
Total	**842**	**272**

Data gathering Procedure

The researcher did distribute the self-made research questionnaire to the respondents and explain the purpose of the study. The questionnaire was delivered to respondents with enough time to complete it. The researcher alone provided all answers to all questions submitted by respondents. Only the responders who are designated are projected in the data after it has been encoded and compiled.

Research Instrument

A two-part, self-made questionnaire was employed by the researcher. The demographic profile is discussed in the first section of the questionnaire as background information of the respondents in terms of; age, gender, marital status, economic Status of Parents, and grade point average in GE 102 subject (Readings in the Philippine History) of the previous semester. The last part is the variables and indicators that would measure the level of satisfaction in the blended learning modality based on the academic achievement of the respondents. The items were developed to be rated on a five-point Likert rating scale (5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1-Strongly Disagree).

Administration of Research Instrument

To request permission to carry out a study at the aforementioned institution, the researcher wrote to the president of Don Carlos Polytechnic College. The head of the DCPC registrar's office, Milca B. Ebales, LPT, received a letter from the researcher asking for the addition of the number of officially enrolled Criminology students for the second semester of the academic year 2021–2022. Additionally, the

researcher sent a letter of request to the college's program director for permission to get a list of the names of officially enrolled criminology students.

Using Yamane's formula, the researcher determined the sample size after collecting the total number and list of names of the DCPC Criminology students.

The researcher used stratified random sampling to choose respondents in a pilot test.

When the questionnaire's Cronbach's Alpha score was above 70, the researcher personally administered it to the respondents by going from room to room. By completing the questionnaire, respondents were given the assurance that the information collected would be kept private.

Validity of the Instrument

A small part of the population was subjected to the instrument's pilot testing phase. To assess the reliability of the instruments, the researcher distributed a sample of 30 questionnaires to 30 individuals who were not among the 272 respondents.

The pilot-testing phase is also a way to measure and establish the reliability of the study's questionnaire, through the determination of its internal consistency via Cronbach's alpha. The Cronbach's Alpha Coefficient was.967, indicating that the statements passed the test and were valid, appropriate, and comprehensible.

Scoring Procedure

Descriptive statistics were used in this study to examine the data that was gathered through the self-made questionnaire and to quantitatively describe the data gathered. With the help of a modified table of ranges from the advanced concepts by Rensis Likert (1968), as shown in table 2, and accurate limitations as provided by L.R., the respondents' mean scores on the Likert-type scale were determined for the interpretation.

Table 2 Scoring Procedure

A. On the level of satisfaction in blended learning modality during the period of COVID-19.

Scale	Mean score range	Result	Result Interpretation
5	4.20-5.00	Strongly Agree	Very Satisfied
4	3.40-4.19	Agree	Satisfied
3	2.60-3.39	Neutral	Neutral
2	1.80-2.59	Disagree	Dissatisfied
1	1.00-1.79	Strongly Disagree	Very Dissatisfied

B. On the Academic Achievement of the respondents in GE 102 subject (Readings in the Philippine History)

1.0 – 1.25
1.50 – 1.75
2.0 – 2.25
2.50 – 2.75
3.0 and below

Final Rating Qualitative Description

Excellent
Very Good
Good
Satisfactory
Unsatisfactory

Statistical Treatment

The following statistical tools were used:

The respondents' demographic profiles and background information were determined using frequency counts and percentages.

The level of satisfaction and academic achievement were calculated using mean and standard deviation.

The correlation between the respondents' demographic profile and academic achievement was calculated using Pearson's r.

To determine the difference between respondents' academic achievement and student satisfaction, analysis of variance, or ANOVA, was used.

Chapter 4

Presentation, Analysis, and Interpretation of Data

This chapter includes a presentation of findings, the analysis of every answer to the problem statement, and the interpretation of data with support from the Review of Related Literature.

The demographic profile and background information of the respondents in terms of age, gender, marital status, family monthly income, grade point average in GE 102 subject; the level of satisfaction in blended learning modality in terms of students' engagement, content, and educational materials, technology, feedback and evaluation, flexibility, and others are presented in this section.

Table 3 shows the Demographic profile and background information of the respondents in terms of age.

Age	f	%
18 Years Old	8	2.9
19 Years Old	112	41.2
20 Years Old	74	27.2
21 Years Old	49	18.0
22 Years Old	17	6.3
23 Years Old	4	1.5
24 Years Old	2	.7
25 Years Old	3	1.1
26 Years Old	1	.4
27 Years Old	1	.4
28 Years Old	1	.4
29 Years Old	0	0
30 Years Old	0	0
Total	272	100.0

Table 3 reveals that the majority of respondents were 19 Years Old (mean = 112, sd = 41.2%). Others were 20 Years Old (mean = 74, sd = 27.2) and 21 Years Old (mean = 49, sd = 18.0%).

Table 4 Demographic profile and background information of the respondents in terms of gender.

Gender	F	%
1. Male	111	40.8
2. Female	161	59.2
Total	272	100.0

According to Table 4, the majority of responses were female (f = 161 or 59.2%). It has been observed that there were more female than male (f=111 or 40.8%) respondents in this study.

Table 5 Demographic profile and background information of the respondents in terms of; marital Status.

Marital Status	F	%
1. Single	262	96.3
2. Widowed/Widower	6	2.2
3. Married	1	4
4. Separated	3	1.1
Total	272	100.0

Table 5 shows that the vast majority of respondents were single (f = 262 or 96.3%). Few were widowed (f = 6 or 2.2%) and married (f = 1 or 1.1%).

Table 6

Demographic profile and background information of the respondents in terms of family income.

Family Monthly Income	F	%
1, 000 – 5,000	186	68.4
6,000 – 10,000	63	23.2
11,000 – 15,000	10	3.7
16,000 – 20,000	8	2.9
21,000 and Above	5	1.8
Total	272	100.0

As seen in Table 6, the majority of respondents reported monthly family incomes between 1,000 and 5,000 (f = 186 or 68.4%). Others had a monthly income of 6,000 – 10,000 (f = 63 or 23.2%0. Among the respondents, a family's highest monthly income was 21,000 or more (f = 5 or 1.8%).

Table 7 Demographic profile and background information of the respondents in terms of GPA.

GPA	F	%
1.0 – 1.25	34	12.5
1.50 – 1.75	104	38.2
2.0 – 2.25	68	25.0
2.50 – 2.75	56	20.6
3.0 and below	10	3.7
Total	272	100.0

The majority of the respondents in table 7 had a GPA of 1.50 – 1.75 (f = 104 or 38.2%). Few got a GPA of 1.0 – 1.25 (f = 34 or 12.5%). A lot of the respondents had a GPA of 2.0 – 2.25 (f = 68 or 25.0%) and 2.50 – 2.75 (f = 56 or 20.6%).

The data above indicate that the respondents are excelling in their academic achievement despite the drastic change in learning modality that the pandemic has brought to the Philippines' educational system. This is in consonance with the statement of Sarıtepeci et al. (2012), which highlights that a blended learning environment increases the academic achievement averages of students, along with the findings of Usta and Mahiroğlu (2015), who concluded that students learning in a blended modality are more successful academically compared to the traditional way of delivering lessons.

Table 8 Level of satisfaction in blended learning modality in terms of Student Engagement.

Indicator	Mean	SD	Interpretation
Blended learning…			
1. motivates the student	4.35	.929	Very Satisfied
2. makes the student responsible for the course (GE 102).	4.34	.943	Very Satisfied
3. encourages the student to work hard at excelling in their assigned roles.	4.24	1.007	Very Satisfied
4. encourages students to exert effort to promote his/her psychological commitment to stay engaged in the learning process to acquire knowledge and build his/her critical thinking in GE 102 course	4.19	.933	Satisfied

5. encourages peer collaboration.	4.02	.975	Satisfied
Overall	4.23	.815	Very Satisfied

Scale	Mean Interval	Qualitative Description	Qualifying Statement
5	4.20-5.00	Strongly Agree	Very Satisfied
4	3.20-4.19	Agree	Satisfied
3	2.60-3.19	Neutral	Neutral
2	1.80-2.59	Disagree	Dissatisfied
1	1.00-1.79	Strongly Disagree	Very Dissatisfied

As shown in table 8, the respondents were very satisfied with blended learning because it "motivates the student" (mean = 4.35, sd = .929), "makes the student responsible for the course (GE 102)" (mean = 4.34, sd = .943) and "encourages the student to work hard at excelling in their assigned roles" (mean = 4.24, sd = 1.007). They were satisfied because it "encourages students to exert effort to promote his/her psychological commitment to stay engaged in the learning process to acquire knowledge and build his/her critical thinking in GE 102 course" (mean = 4.19, sd = .933) and "encourages peer collaboration" (mean = 4.02, sd = .975). Overall, the respondents were very satisfied with the blended learning modality based on the academic achievement of the respondents during COVID-19 in terms of Student Engagement (mean = 4.23, sd = .815).

Study shows that Blended Learning Modality encourages students to become motivated, committed, and became more responsible in their dealing with their studies. They see this as an opportunity to grow psychologically and stay engaged in the learning process and excel in their assigned roles. This conforms to the pronouncement of Reschly and Christenson (2012), that Student shows a high degree of attention, determination, involvement, curiosity, interest, and desire when they are learning or being taught in a blended learning approach.

Table 9 Level of satisfaction in blended learning modality in terms of Content and Educational Materials.

Indicator	Mean	SD	Interpretation
Modules in Blended Learning			
1. met the student's needs to learn.	4.19	.940	Satisfied
2. have organization in the labeling of topics and are comprehensible to the student.	4.17	.940	Satisfied
3. contain relevant objectives, material, and associated activities.	4.11	.969	Satisfied

4. are quite comprehensive including all the objectives.	4.09	.969	Satisfied
5. are presented in chunks and are easily digestible.	4.02	1.040	Satisfied
Overall	4.11	.829	Satisfied

Scale	Mean Interval	Qualitative Description	Qualifying Statement
5	4.20-5.00	Strongly Agree	Very Satisfied
4	3.20-4.19	Agree	Satisfied
3	2.60-3.19	Neutral	Neutral
2	1.80-2.59	Disagree	Dissatisfied
1	1.00-1.79	Strongly Disagree	Very Dissatisfied

All statements in table 9 show that the respondents were satisfied with the blended learning modality. The statement "met the student's needs to learn" (mean = 4.19, sd = .940) got the highest mean and the statement "are presented in chunks and are easily digestible" (mean = 4.02, sd = 1.040) got the lowest mean. Overall, the respondents were satisfied with the blended learning modality based on the academic achievement of the respondents during COVID-19 in terms of Content and Educational Materials (mean = 4.11, sd = .829).

The result indicates that the students are satisfied with the blended learning modality because it allows them to understand the lessons they need to learn, and the materials provided to them are well-organized and comprehensible. This is reflected in the statements of Mondi et al. (2007) and Wong et al. (2018), which suggest that interactive course material in blended learning likely inspires students to learn. Thus, respondents expressed support for their active participation in course or subject activities in the blended learning environment, finding it stimulating and helpful to follow the course material in their homework and projects. This implies that the respondents place significant value on the information and instructional materials provided to them. Through the activities offered in these materials, they found them understandable and beneficial for learning.

Table 10 Level of satisfaction in blended learning modality in terms of technology.

Indicator	Mean	SD	Interpretation
The student . . .			
1. used a technological device that builds conceptual and practical relevance in the practice of knowledge in the GE 102 course.	4.17	.940	Satisfied

2. submits his/her course tasks before it's due because the internet connectivity is stable.	4.17	.999	Satisfied
3. used technological devices that provide relevant applications in understanding the concept of the GE 102 course.	4.15	.983	Satisfied
4. owns a smartphone/laptop that helps him/her to accomplish the set of activities in the GE102 course.	4.13	1.046	Satisfied
5. finds it difficult to accomplish the task in GE 102 course because of poor internet connectivity.	4.08	.985	Satisfied
Overall	4.14	.833	Satisfied

Scale	Mean Interval	Qualitative Description	Qualifying Statement
5	4.20-5.00	Strongly Agree	Very Satisfied
4	3.20-4.19	Agree	Satisfied
3	2.60-3.19	Neutral	Neutral
2	1.80-2.59	Disagree	Dissatisfied
1	1.00-1.79	Strongly Disagree	Very Dissatisfied

Table 10 reveals that the respondents were satisfied as shown in the results of all the statements. The respondents were satisfied because the students "used a technological device that builds conceptual and practical relevance in the practice of knowledge in the GE 102 course." (mean = 4.17, sd = .940) and "submits his/her course tasks before it due because the internet connectivity is stable" (mean = 4.17, sd = .999). These statements got the highest mean values. The statement "finds it difficult to accomplish the task in GE 102 course because of poor internet connectivity" (mean = 4.08, sd = .985) got the lowest mean. Students in a blended learning modality can participate in the online portion of the class and review class materials from anywhere they have internet access, allowing them to work from wherever they want (Kenney, 2011). Furthermore, students can complete the school task when it is convenient for them, allowing them to more effectively balance schoolwork and outside obligations.

The findings indicated that the respondents were already familiar with using the many elements of the technical tools that assist their study, including the use of a technological device that builds conceptual and practical relevance in the practice of knowledge in the GE 102 course. However, the relatively lower mean for the statement about difficulties in completing tasks due to poor internet connectivity implies that while most students experience positive outcomes from the use of technology, a portion of them still face challenges related to internet connectivity. This could hinder their ability to fully engage with the course

content and complete assignments in a timely manner. This signifies that technological advancements and stable internet access contribute to better learning experiences, addressing issues related to inconsistent or poor connectivity is crucial in blended learning modality.

Table 11 Level of satisfaction in blended learning modality in terms of feedback and evaluation.

Indicator	Mean	SD	Interpretation
1. Mentoring the task in blended learning sessions helps the student a lot.	4.38	2.659	Very Satisfied
2. Feedback improves the student's confidence, self-awareness, and enthusiasm for learning in GE 102 course.	4.29	.917	Very Satisfied
3. Feedback provided by the instructor in the blended learning modality guides the student on how and what to do in his/her tasks/exercises in GE 102 course.	4.24	.907	Very Satisfied
4. Quizzes and exams in blended learning sessions help the student to understand what he/she has learned and reflected on his/her progress.	4.22	.908	Very Satisfied
5. Feedback and evaluation in GE 102 course with a blended learning modality are clear and understandable.	4.21	.961	Very Satisfied
Overall	4.27	.925	Very Satisfied

Scale	Mean Interval	Qualitative Description	Qualifying Statement
5	4.20-5.00	Strongly Agree	Very Satisfied
4	3.20-4.19	Agree	Satisfied
3	2.60-3.19	Neutral	Neutral
2	1.80-2.59	Disagree	Dissatisfied
1	1.00-1.79	Strongly Disagree	Very Dissatisfied

As shown in table 11, the statement "Mentoring about the task in blended learning sessions helps the student a lot" (mean = 4.38, sd = 2.659) got the highest mean, and the statement "Feedback and evaluation

in GE 102 course with a blended learning modality are clear and understandable" (mean = 4.21, sd = .961) got the lowest mean. The outcomes further demonstrate that the respondents were all satisfied, as shown by the outcomes of every statement. Overall, the respondents were very satisfied with the blended learning modality based on the academic achievement of the respondents during COVID-19 in terms of feedback and evaluation (mean = 4.27, sd = .925).

Effective feedback encourages students to reflect on their learning and learning strategies to improve their learning progress. Feedback in blended learning, therefore, brings about an improvement in students' performance and academic achievement. As a result, feedback and evaluation in blended learning assist the student in reflecting on their learning and learning strategies so that they can make adjustments to improve their learning progress (Kintu, 2017).

The outcome illustrates that respondents are motivated to achieve in the greatest way they can when they receive constructive criticism of their outputs. Students are inspired to put forth more effort and succeed academically as a result.

Table 12 Level of satisfaction in blended learning modality in terms of flexibility.

Indicator	Mean	SD	Interpretation
24. promotes personal ownership (Self-discipline)	4.28	.978	Very Satisfied
25. allows the student to access the course materials from anywhere at any time.	4.28	.961	Very Satisfied
22. provides more opportunities to regulate the student's learning process and the learning environment.	4.18	.954	Satisfied
23. enables the student to complete his/her task at his/her own pace.	4.18	.948	Satisfied
21. enables the student to learn at his/her own pace.	4.17	.969	Satisfied
Overall	4.22	.962	Very Satisfied

Scale	Mean Interval	Qualitative Description	Qualifying Statement
5	4.20-5.00	Strongly Agree	Very Satisfied
4	3.20-4.19	Agree	Satisfied
3	2.60-3.19	Neutral	Neutral

2	1.80-2.59	Disagree	Dissatisfied
1	1.00-1.79	Strongly Disagree	Very Dissatisfied

Table 12 reveals that the respondents were very satisfied with blended learning because it "promotes personal ownership (Self-discipline)" (mean = 4.28, sd = .978) and "allows the student to access the course materials from anywhere at any time" (mean = 4.28, sd = .961). They were satisfied because blended learning "provides more opportunities to regulate the student's learning process and the learning environment" (mean = 4.18, sd = .954), "enables the student to complete his/her task at his/her own pace" (mean = 4.18, sd = .948) and "enables the student to learn at his/her own pace" (mean = 4.17, sd = .969). Overall, the respondents were very satisfied with the blended learning modality based on the academic achievement of the respondents during COVID-19 in terms of flexibility (mean = 4.22, sd = .962).

Because of the flexibility of blended learning and the ability to access internet resources, students can learn at their own pace, which means a teacher can help speed up the learning process or provide more advanced resources as needed. Changing the norm of traditional teaching tactics can be difficult, especially for experienced teachers. The new blended learning experience, on the other hand, has some extremely advantageous properties (Jin, 2021). Thus, the students and their needs, as well as educational services, are central to flexible learning in blended learning, allowing them to choose what, when, how, and where they learn. The result shows that education is more accessible with blended learning (Watson, 2008).

The findings suggest that respondents like to learn at their own pace. However, this does not mean that they are unproductive students; on the contrary, it enables them to better manage their time and utilize their learning time over time.

Table 13 Test of the significant relationship between the level of satisfaction in blended learning modality and academic achievement of the respondents.

Variable	r	p-value	Interpretation
Students' Engagement	-.128	.035	Significant
Content and Educational Materials	-.116	.055	Not Significant
Technology	-.123	.043	Significant
Feedback and Evaluation	-.096	.116	Not Significant
Flexibility	-.137	.024	Significant
Overall	-.135	.024	Significant

As shown in table 13, the variables "Content and Educational Material" (r = -.116, p–value = .055) and "Feedback and Evaluation" (mean = -.096, sd = .116) had no significant relationship with the respondents' academic achievements. However, the variables "Students' Engagement" (r = -.128, sd = .035), "Technology" (r = -.123, p–value = .043), and "Flexibility" (r = -.137, p–value = .024) had a significant relationship with the student's academic achievements. Moreover, the respondents' overall academic

achievement and their level of satisfaction with the blended learning modality are significantly correlated (r = -.135, p–value = .024). Therefore, we reject the null hypothesis which states that there is no significant relationship between the level of satisfaction in blended learning modality and academic achievement of the students in GE 2 or Readings in the Philippine History subject.

Student achievement and satisfaction are two of the most important learning outcomes in blended learning and are regarded as key indicators of educational quality (Betoret, 2017). Course satisfaction is an important outcome because it influences students' decisions to continue or drop out of a course. Therefore, this study has found that while subject value significantly influences choice, effort, and perseverance, satisfaction has a major influence on achievement.

Table 14 Test of significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they are grouped according to their demographic profile.

Variable	SS between	SS within	MS between	MS within	F/t	P – value
1. Age	14.337	137.494	1.434	.527	2.722	.003
2. Gender					1.472	.142
3. Marital Status	.608	151.223	.203	.564	.359	.782
4. Family Income	2.033	149.798	.508	.561	.906	.461

Table 14 shows that the student's satisfaction with blended learning had no significant difference when they were grouped according to Gender (t = 1.472, p–value = .142), Marital Status (F = .359, p–value = .782), and Family Income (F = .906, p – value = .461). However, when they were grouped according to Age (f = 2.722, p – value = .003), their satisfaction with the blended learning modality during the period of COVID-19 had a significant difference. The null hypothesis, " There is no significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they are divided into groups based on their demographic profile," is thus rejected.

They discovered that while demographics have a strong correlation with student achievement, "the strongest predictors of overall academic success are the grades students receive in core knowledge (Kaighobadi et al., 2008). More specifically, and importantly, their study confirmed that demographic variables such as age, and gender, can be influential, as traits such as these have been shown a significant difference in academic success. Although some have argued that these factors do not affect academic success other than randomness or another factor making it incidental, such as poverty, these findings warrant further investigation and the development of strategies to counteract academic achievement imbalances caused by such standard characteristics. Allen (2008) discovered that variables such as student gender influence performance and academic achievement.

This study found a significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they are grouped according to their age.

Chapter 5
Summary of Findings, Conclusions, and Recommendations

This chapter presents the summary, findings revealed, conclusions drawn, and recommendations offered in this study.

Findings

This study gathered the following findings:

Based on the respondents' demographic profile, a significant portion of the respondents are under the age of 20. Their family income per month generally ranges from ₱1,000.00 to ₱5,000.00, with the majority being female, most of them single, and many earning final average grades of 1.50–1.75 in the previous semester in the GE 102 course. These findings imply that socio-economic factors, such as age and income level, play a crucial role in shaping students' experiences and outcomes in blended learning modalities during the COVID-19 era. Younger students from low-income households may face unique challenges, such as limited access to technology or internet connectivity, which can affect their ability to fully engage with blended learning. However, their relatively strong academic achievement suggests a level of adaptability and resilience, indicating that satisfaction with the learning process may serve as a motivating factor for academic achievement. Understanding these dynamics is essential for tailoring blended learning strategies to meet the diverse needs of students, ensuring inclusivity, and promoting equitable educational opportunities.

In addition, students expressed a high level of satisfaction with the blended learning modality, particularly in areas such as student engagement, educational materials, technology, feedback, and flexibility. The study shows that the blended learning modality encourages students to become motivated, committed, and more responsible in their dealings with their studies. They see this as an opportunity to grow psychologically, stay engaged in the learning process, and excel in their assigned roles. It allows them to understand the lessons that they need to learn, and the materials provided to them have an organization in the labeling of topics and are comprehensible to the students. The respondents were already familiar with using the many elements of the technical tools that assist their study, including the use of a technological device that builds conceptual and practical relevance in the practice of knowledge in the GE 102 course. However, the relatively lower mean for the statement about difficulties in completing tasks due to poor internet connectivity implies that while most students experience positive outcomes from the use of technology, a portion of them still face challenges related to internet connectivity. This could hinder their ability to fully engage with the course content and complete assignments in a timely manner. This signifies that technological advancements and stable internet access contribute to better learning experiences. Addressing issues related to inconsistent or poor connectivity is crucial in the blended learning modality. The respondents like to learn at their own pace, but this does not mean that they are unproductive students. On the contrary, it enables them to better manage their time and utilize their learning time effectively over time.

Additionally, in terms of the significant relationship between the level of satisfaction in blended learning modality and academic achievement of the respondents in terms of student engagement, content and educational materials, technology, feedback, evaluation, and flexibility, this study shows that the variables student's engagement, content and educational materials, technology, feedback and evaluation, and flexibility have a significant relationship with the student's academic achievement in GE 102 or Readings in the Philippine History subject/course. Therefore, we reject the null hypothesis 1 "There is no significant

relationship between the level of satisfaction in blended learning modality and academic achievement of the respondents".

Finally, this study shows that when they were grouped according to Age, their satisfaction with the blended learning modality during the period of COVID-19 had a significant difference. This is in relation to the significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they were grouped according to their demographic profile. The null hypothesis, "There is no significant difference between the student's satisfaction and academic achievement in blended learning modality during the period of COVID-19 when they are grouped according to their demographic profile," is thus rejected.

Conclusions

The demographic profile of the respondents highlights the significant influence of socio-economic factors, such as age and income level, on students' experiences and outcomes in blended learning modalities during the COVID-19 era. While younger students, particularly those from low-income households, may face challenges related to limited access to technology and internet connectivity, their strong academic performance suggests that they possess a high degree of adaptability and resilience. The positive correlation between their satisfaction with the learning process and academic achievement underscores the importance of creating an inclusive and flexible learning environment. To ensure equitable educational opportunities for all students, it is crucial to address the technological barriers they face and design blended learning strategies that cater to their diverse needs. By doing so, institutions can encourage greater student engagement and academic success, even in the face of socio-economic challenges.

The findings reveal that students exhibit a high level of satisfaction with the blended learning modality, particularly in areas such as engagement, educational materials, technology, feedback, and flexibility. This mode of learning nurtures motivation, commitment, and responsibility among students, offering them opportunities for psychological growth and active participation in their educational journey. The organization and comprehensibility of learning materials, combined with familiarity with technological tools, further enhance their learning experience. However, challenges such as poor internet connectivity persist, affecting some students' ability to engage fully and complete tasks efficiently. These findings emphasize the critical role of stable internet access and technological advancements in maximizing the benefits of blended learning. Moreover, the students' preference for self-paced learning demonstrates their ability to effectively manage their time, showcasing productivity and adaptability in this learning environment. Addressing connectivity issues and ensuring accessible technological resources are vital to improving blended learning experiences and supporting student success.

The study establishes a significant relationship between students' satisfaction with the blended learning modality and their academic achievement in the GE 102 course, particularly in the areas of student engagement, content and educational materials, technology, feedback, evaluation, and flexibility. These findings highlight that higher levels of satisfaction in these key dimensions contribute positively to students' academic performance. The data underscores the importance of encouraging an engaging and supportive blended learning environment, as it directly impacts students' ability to excel in their studies. Consequently, the null hypothesis stating that there is no significant relationship between satisfaction with the blended learning modality and academic achievement is rejected. These insights emphasize the need for continuous enhancement of blended learning strategies to optimize student engagement and success.

Finally, this study reveals a significant difference in students' satisfaction with the blended learning modality during the COVID-19 period when grouped according to their demographic profiles, particularly age. This indicates that demographic factors play a critical role in shaping students' experiences and academic outcomes in blended learning environments. The rejection of the null hypothesis underscores the influence of age and potentially other demographic characteristics on satisfaction and academic achievement. These findings emphasize the importance of considering demographic diversity when designing and implementing blended learning strategies to ensure inclusivity and effectiveness. Tailoring approaches to meet the varied needs of students can enhance their learning experiences and promote equitable educational outcomes.

Recommendations

Based on the results, the following are recommended:

It is recommended that students take an active role in understanding the factors that affect their learning in blended environments. They should look for available resources and support within their schools and communities, especially for technology access and managing their time and studies. Students should also talk to their teachers and classmates about any challenges they face and ask for help when needed.

Schools and universities should use the information from this study to improve their blended learning strategies. It is important for institutions to assess the specific needs of their students based on things like age, income, and access to technology. They should make sure students have the resources they need, like devices and internet access, and provide training for teachers to help them use technology effectively in their teaching.

Teachers should try to use flexible teaching methods that cater to different student needs. It is recommended that teachers regularly check in on students' progress and satisfaction to identify where they may need extra help. Providing helpful feedback and offering personalized learning options would help students succeed in a blended learning setup.

LGUs should focus on providing resources to help make blended learning more accessible, like funding for technology and internet infrastructure. It is recommended that LGUs work with schools to offer training for both teachers and students on how to use technology. LGUs should also make sure that students, especially those in rural areas, have the tools they need to succeed in a blended learning environment.

Parents and guardians should support their children's learning by helping them set up a good study space at home and manage their time for schoolwork. It is recommended that parents stay informed about what blended learning involves so they can better understand the challenges their children face and provide guidance and encouragement when needed.

NGOs should continue to push for better educational policies that support blended learning, especially in underserved areas. They can use the findings from this study to advocate for fairer distribution of resources and work with schools to provide additional support and training for teachers and students.

Future researchers should continue exploring how blended learning affects students over time, focusing on how different factors, like age and family income, influence their success. It is also recommended that future studies look at the role of teachers, student involvement, and community support in making blended learning successful. Additionally, research could explore how blended learning affects other areas of student growth, such as problem-solving and emotional development.

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