Blended Learning Instruction in Relation to Students' Engagement and Satisfaction in Criminology Program

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ABSTRACT

In higher education, the shift to blended learning, combining online and face-to-face instruction, has introduced new opportunities for flexible, engaging learning experiences. This study examined how blended learning instruction relates to the engagement and satisfaction of criminology students in a higher education institution in Ozamiz City. The study utilized a descriptive-correlational research design. Data were gathered from 135 criminology students enrolled during the first semester of the academic year 2025–2026. They were selected through stratified sampling. Researcher-made instruments were used in gathering data. Mean, Standard Deviation, and Pearson Product-Moment Correlation Coefficient were used to analyze the data. The findings revealed that students viewed the implementation of blended learning to a very great extent. They reported very high levels of engagement and satisfaction. Blended learning instruction has a significant relationship with student engagement. In addition, blended learning instruction and student satisfaction have also been significant in the relationship. It was concluded that blended learning instruction was implemented successfully and promoted high levels of student engagement and satisfaction among criminology students. Stakeholders may collaboratively sustain and strengthen blended learning by continuously improving instruction, technology, faculty development, and support systems to enhance student engagement and learning outcomes.

Keywords: Blended Learning, Cognitive Engagement, Instructor Effectiveness, Student Satisfaction, Technology Use

INTRODUCTION

The foundation of societal advancement is education, which shapes not only the lives of individuals but also the collective destiny of communities. A top-notch education is essential for fostering critical thinking, creativity, and civic duty in a time of technological advancement and global connectedness (Xu et al., 2023). Importantly, recent studies show that unequal access to digital tools and learning environments significantly affects outcomes for students, underscoring the urgency of addressing equity and inclusivity in modern education systems (Lestari et al., 2024). Furthermore, classroom strategies like differentiated instruction and heterogeneous grouping, in conjunction with educational leadership, are essential for reducing achievement inequalities associated with socioeconomic status. Investments in inclusive, adaptive, and well-led educational systems thus hold promise not only for personal fulfillment but also for broader social welfare and economic development (Liu et al., 2025).

Bachelor of Science in Criminology is an applied, interdisciplinary program that combines classroom-based theory (criminology, law, sociology, and psychology) with skills-based training in investigation, forensics, and supervised field internships so graduates are prepared for roles in policing, corrections, and forensic work. Philippine higher education authorities have specifically shifted criminology and other professional programs to flexible learning modalities using a mix of online, blended, and limited face-to-face activities in response to the COVID-19 era and ongoing health and access concerns. This allows for the preservation of practical components while delivering lecture and seminar work remotely when necessary (Commission on Higher Education [CHED], 2022). Practical instruction has been augmented by remote forensic teaching networks and digital lab resources (e-seminars, virtual casework, and shared forensic databases) that help sustain hands-on

competencies when in-person labs or ride-alongs are restricted (Katsos et al., 2022). Additionally, research among criminology students showed that while students were generally satisfied with teaching methods, teacher support, and departmental assistance under the online modality, they experienced moderate difficulties with gadgets, signal strength, and availability of academic resources (Damayon, 2022).

Higher education's quick transition to online instruction has changed institutional procedures by compelling widespread use of remote delivery, which highlighted both the potential of digital pedagogy (flexibility, broader access, and new instructional tools) and the unpreparedness of many systems to deliver quality online learning at scale. Since 2020, research syntheses have demonstrated that well-designed online courses can produce learning results that are on par with in-person education, particularly when they include instructor presence, clear structure, and active learning, but effectiveness depends strongly on course design and teacher training (Meng et al., 2024). At the same time, studies warn that emergency remote teaching exposed persistent equity problems (unequal internet/devices), gaps in student engagement and academic integrity, and assessment challenges that require institutional policy, technical investments, and targeted student support to resolve (Mok, 2022). As long as universities make investments in pedagogy, infrastructure, and inclusive support systems, the evidence suggests a long-term shift toward blended and hybrid models that seek to combine the advantages of face-to-face engagement with the adaptability and scalability of online resources (Tesar, 2020).

Since the pandemic, blended learning which deliberately combines in-person instruction with online synchronous and asynchronous activities has taken the lead in education because of its adaptability, ability to customize learning speed, and capacity to maintain interaction outside of the classroom (Tong et al., 2022). After the Commission on Higher Education issued Memorandum No. 4, series of 2020, which offered recommendations for implementing blended learning modalities, higher education institutions (HEIs) in the Philippines started a system-wide transition to blended learning in Academic Year 2020–2021 (Dabu, 2022). Despite its growing adoption, the blended learning approach has drawn both attention and reservations over the years, since current research reveals a lack of knowledge about the particular difficulties and opportunities experienced by teacher educators in HEIs while highlighting global challenges in delivering instruction through this medium (Boahemaa Brenya, 2023). Although blended learning is widely recognized for its potential to enhance learning outcomes, there remains insufficient evidence on the most effective design strategies needed to support immersive learning experiences and improve accessibility to education (Bizami et al., 2022). In order to maximise the efficacy of blended learning environments, studies also highlight the significance of well-structured, appropriately paced courses that fully incorporate synchronous and asynchronous components (Heilporn et al., 2021).

In higher education, blended learning continues to present complex opportunities and difficulties, especially for teacher educators who are responsible for creating and facilitating meaningful learning experiences. According to recent research, blended learning increases student flexibility and engagement, but its effectiveness is mostly dependent on teachers' technology proficiency, instructional design abilities, and institutional support networks (Shah et al., 2024). The successful application of blended learning models is hampered by obstacles that many instructors encounter, including a lack of digital literacy, a lack of time for course redesign, and a lack of access to instructional tools. Additionally, the sustainability of blended learning necessitates intentional alignment of pedagogy, technology, and evaluation to guarantee learning continuity and equity, rather than merely combining online and in-person forms (Lomellini et al., 2025). Additionally, emerging studies suggest that effective blended learning environments should promote learner-centered approaches that foster collaboration, self-regulated learning, and digital inclusion (Wang et al., 2025).

In order to achieve successful learning outcomes in higher education, student engagement a multifaceted notion that includes behavioural, cognitive, and emotional or affective involvement in academic experiences is crucial (De Bruijn-Smolders & Prinsen, 2024). Studies show that blended learning has the potential to support academic, personal, social, and civic engagement when it incorporates interactive technologies and collaborative learning strategies that enhance students' motivation, participation, and sense of belonging in both physical and virtual classrooms (Kahu et al., 2023). Despite these benefits, sustaining active student engagement remains a challenge for educators across all teaching modalities, with difficulties becoming more pronounced in remote and online learning environments (Ahshan, 2021). Blended learning may only have a

minimal impact on student performance when students rely too heavily on online solutions without engaging in deeper cognitive processes, despite the fact that e-learning tools are thought to be effective and engaging (Mulingtapang et al., 2025). As a result, current research highlights that well-designed instructional strategies such as interactive pedagogies, prompt instructor feedback, adaptive digital platforms, social presence, collaborative learning opportunities, and personalised learning pathways are essential to the success of blended learning. These strategies all work together to encourage active engagement and enhanced academic performance (Santos & Rivera, 2024; Del Rosario & Tan, 2025).

Student satisfaction in criminology and related higher education programs is highest when institutions provide well-structured and effectively taught core courses integrated with hands-on learning experiences, responsive student services, and strong mentorship during field placements, with satisfaction closely tied to the perceived quality of advising, facilities, and support services (Patalinghug et al., 2021). Research further emphasizes that student well-being, positive classroom climate, mental health support, and reasonable faculty workloads significantly influence engagement and overall program satisfaction, suggesting that investments in student support systems and faculty development lead to measurable gains in satisfaction (Ware et al., 2024). It has been demonstrated that in the Philippine context, open assessment procedures, easily accessible online learning materials, the incorporation of digital tools, and flexible course delivery formats improve perceptions of academic fairness and satisfaction, especially among working and non-traditional learners (Reyes & Bautista, 2025; Del Rosario & Lim, 2025). Local studies also reveal that while students generally report satisfaction with service quality and extracurricular engagement, disparities exist across educational levels and programs, and challenges persist in distance and hybrid learning modalities, highlighting ongoing gaps in aligning institutional services and learning modes with student expectations (Ramos, 2024; Flores et al., 2024; Nunez, 2023).

In order to provide more flexibility and continuity of learning, many criminology programs have switched from solely in-person instruction to blended or hybrid models that combine online lectures and digital materials with in-person practical sessions; however, this transition has also introduced persistent challenges related to course design, faculty training, and students' access to reliable technology, as observed in higher education and criminology-specific programs in the Philippines (Platonova et al., 2022). While hybrid learning has been shown to enhance academic resilience, it has simultaneously widened digital inequalities, particularly in resource-constrained institutions and among students from lower socioeconomic backgrounds (Adedoyin & Soykan, 2020). In criminology education specifically, maintaining the quality of hands-on, skills-based training such as fieldwork, laboratory activities, crime scene analysis, and practical scenarios remains difficult when significant portions of instruction move online, a problem made worse by teachers' lack of familiarity with online pedagogy and learning management system design, as well as unequal access to devices and internet connectivity, which often results in poorly integrated materials and passive learning approaches (Marisga, 2024; Santos & Dela Cruz, 2023).

A population gap exists in the study of blended learning instruction in relation to students' engagement and satisfaction because most existing research has concentrated on students from general programs such as business, education, health sciences, and engineering, while criminology students remain underrepresented. Criminology programs have a unique student population whose academic needs differ significantly from those in other disciplines, as they require both theoretical knowledge and practical applications such as law enforcement simulations, courtroom exposure, and field practice. However, limited studies directly address how blended learning affects this group of learners. This gap highlights the need to focus on criminology students as a distinct population, as understanding their level of engagement and satisfaction under blended learning.

Most existing research has primarily focused on general academic disciplines, leaving criminology programs underexplored. For instance, Alqurashi (2019) focused on undergraduate education students and investigated the relationship between academic accomplishment, student satisfaction, and participation in blended learning environments. Although the study did not take into account students from applied or law-related subjects like criminology, it did find that online interaction and self-efficacy were important predictors of satisfaction. Similarly, Kumar et al. (2021) investigated the efficacy of blended learning in engineering and business programs, emphasizing technological adaptability and motivation. While their results highlighted positive

engagement outcomes, the participants represented technical and management disciplines again overlooking criminology students whose learning involves both theoretical and field-based components.

Moreover, Villanueva and Santos, (2023) examined Filipino health sciences students' satisfaction with integrated learning, revealing that flexibility and instructional design strongly influenced satisfaction. However, this research also excluded criminology programs, which have unique academic and practical requirements involving simulations, investigations, and law enforcement training. These studies collectively demonstrate that while blended learning has been widely examined across various disciplines, empirical studies on criminology students is lacking. In order to further understand how blended learning impacts engagement and satisfaction within this unique academic discipline, future research should address this population gap given the specialized nature of criminology education, which necessitates both cognitive and experiential learning.

The purpose of this study is to examine how blended learning instruction influences the engagement and satisfaction of criminology students, addressing their unique academic and practical learning needs as an underrepresented population in existing research, whether blended instruction successfully promotes the harmony between theoretical understanding and real-world applications needed in criminology programs and aids in the creation of additional teaching techniques that improve students' overall educational experiences.

This study on blended learning highlights its overall benefits for various stakeholders in education. It shows how combining traditional and digital methods can make lessons more engaging, improve student participation, and enhance overall learning outcomes. Educational institutions can use these insights to strengthen instructional quality and student performance, while policymakers may find them useful in shaping standards that integrate technology to meet modern learning needs. Furthermore, the study provides a foundation for future research on the long-term effects of blended learning on learners' skills, employability, and professional development, contributing to the ongoing improvement of educational strategies.

The findings of this study can be extremely helpful to both educators and students. Blended learning gives teachers the chance to employ a variety of digital technologies that encourage creativity and teamwork, develop their teaching methods, and tailor their lessons to the requirements of their pupils. On the other side, students can take advantage of more flexible learning opportunities that let them learn at their own speed and acquire critical thinking, digital literacy, and self-directed learning—all of which are crucial 21st-century abilities. This study enables educators and learners to fully utilize technology-enhanced learning by bridging the gap between conventional and contemporary methods.

In providing valuable insight on how to effectively integrate online and in-person learning methodologies to improve student engagement and satisfaction in the criminology program, the study output can be used in blended learning training. The results can help instructors create flexible and engaging learning environments that blend theoretical talks with real-world, technologically advanced activities like online case analysis or virtual crime scene investigations. Instructors can find the most effective teaching strategies, enhance course delivery techniques, and promote a more student-centered learning environment by utilizing the research findings. In the end, using this research will help criminology students in a blended learning environment do better academically, be more motivated, and be more satisfied overall.

THEORETICAL FRAMEWORK

This study is anchored in the following theories: Community of Inquiry by Garrison, Anderson, and Archer (2000), Self-determination by Deci and Ryan (1985), and Expectancy-Disconfirmation Theory (EDT) by Oliver (1980).

The Community of Inquiry (CoI) Framework, developed by Garrison, Anderson, and Archer (2000), provides a theoretical framework for comprehending successful hybrid and online learning environments. It focuses on three interconnected components that together produce a meaningful educational experience: instructional presence, social presence, and cognitive presence. The degree to which students can create and validate meaning through introspection and conversation is referred to as cognitive presence. The ability of individuals

to project their identities, establish trust, and engage in candid communication within the learning community is a component of social presence. In contrast, teaching presence refers to the planning, directing, and facilitating of learning activities to achieve desired results. The CoI framework is a pillar of online and blended learning research because these components work together to promote deep learning and ongoing engagement (Garison et al., 2000).

The CoI Framework closely resembles the Blended Learning Instruction variable, as it encapsulates the key elements that characterize the quality of learning in both in-person and virtual environments. Teaching presence in blended learning ensures that instructional design effectively combines digital and in-person elements; social presence fosters cooperation and interaction in both physical and virtual environments; and cognitive presence supports critical thinking and knowledge application across a variety of learning modalities. By addressing these three aspects, the CoI paradigm provides a comprehensive framework for assessing and improving students' satisfaction and engagement in blended learning settings, ensuring that technology integration enhances rather than replaces real-world educational interaction.

The Community of Inquiry (CoI) Framework has been used in numerous studies to evaluate and improve blended learning environments across a range of academic fields. For example, Kumar et al. (2022) examined how the three CoIs affect student satisfaction and engagement in blended learning environments and found that teaching presence significantly influences students' overall experience. Similarly, Al-Samarraie and Saeed 2018) demonstrated that cognitive presence strongly predicts students' perceived learning objectives in blended learning, emphasizing the importance of reflective activities and guided discussions. Using the CoI framework, Villanueva and Santos (2023) investigated students' satisfaction and engagement in blended learning across health sciences programs in the Philippine context. They concluded that social presence promotes teamwork and a sense of belonging, even in partially online learning environments. Together, these studies demonstrate the flexibility and applicability of the CoI paradigm in evaluating the efficacy of blended learning, offering a solid theoretical foundation for understanding how online and in-person interactions jointly contribute to student learning outcomes.

Self-Determination Theory (SDT) is a psychological framework developed by Deci and Ryan (1985) that highlights how human motivation and the satisfaction of fundamental psychological needs contribute to learning, development, and wellbeing. The theory states that people are more likely to participate in activities when three basic needs are met: relatedness (the experience of meaningful connections with others), competence (the sense of being effective in one's activities), and autonomy (the feeling of having control over one's actions). Students show greater engagement, perseverance, and pleasure in their educational experiences when these demands are met, making SDT particularly relevant in learning environments such as blended learning. On the other hand, performance and motivation may suffer if these demands are not met. Therefore, SDT offers a solid basis for comprehending how learning settings might be designed to improve intrinsic motivation and favorable educational results (Ryan & Deci, 2020)

Since it highlights the significance of autonomy, competence, and relatedness, three psychological demands that directly affect students' motivation to learn and actively participate in their education, the Self-Determination Theory (SDT) substantially correlates with the student engagement variable. When students experience relatedness, they feel connected to their professors and peers; when they feel competent, they think they can achieve in academic assignments; and when they feel autonomous, they feel in control of their learning choices. Together, these elements promote intrinsic motivation, which encourages students to participate more fully, persevere longer, and achieve greater academic results. Therefore, SDT provides a robust theoretical framework for understanding how supportive learning environments and internal motivation foster student engagement in both conventional and contemporary educational settings (Deci & Ryan, 2000).

The study by Jang et al. (2016), which examined how teachers' autonomy-supportive behaviors affect students' classroom engagement, is an example of a study that applied Self-Determination Theory (SDT). According to the study, children showed greater behavioral, emotional, and cognitive engagement when teachers promoted autonomy by offering meaningful options, encouraging self-expression, and respecting their opinions. This bolsters the idea of SDT, which holds that meeting students' fundamental psychological needs for relatedness, competence, and autonomy increases their intrinsic motivation and general level of academic engagement.

Expectancy-Disconfirmation Theory (EDT), originally developed by Oliver (1980), explains satisfaction as the result of the comparison between an individual's expectations and actual experiences. In the context of education, this theory suggests that students form expectations about the quality of instruction, learning environment, and academic support before engaging in a course or program. After their learning experience, they evaluate whether the actual performance meets, exceeds, or falls short of those expectations. When the experience exceeds expectations, students feel positively "disconfirmed," resulting in higher satisfaction. Conversely, if the experience fails to meet expectations, students experience negative disconfirmation, leading to dissatisfaction (Oliver, 1980).

The Expectancy-Disconfirmation Theory (EDT) aligns with the student satisfaction variable because it posits that pleasure results from comparing expectations with actual experiences. According to this idea, before enrolling in a course or program, students develop expectations about the quality of instruction, the learning environment, and academic support. After their learning experience, they evaluate whether the actual performance meets, exceeds, or falls short of those expectations. When the experience exceeds expectations, students feel positively "disconfirmed," resulting in higher satisfaction. Conversely, if the experience fails to meet expectations, students experience negative disconfirmation, leading to dissatisfaction (Oliver, 1980).

A study by Brown and Mazzarol (2019) applied the Expectancy-Disconfirmation Theory (EDT) to examine the factors influencing student satisfaction in higher education**.** The researchers investigated how students' expectations regarding teaching quality, learning resources, and institutional support compared to their actual experiences throughout the semester. Findings revealed that when students perceived their academic experiences as exceeding expectations, such as through engaging instructors, timely Feedback, and accessible learning materials, they reported higher levels of satisfaction and loyalty toward the institution. Conversely, unmet expectations led to dissatisfaction and decreased retention intentions. This study shows that EDT is a useful framework for understanding and enhancing student satisfaction in higher education settings, as it clearly describes the cognitive processes through which students assess and make judgments about their educational experiences.

Conceptual Framework

This study examines the impact of Blended Learning Instruction, the independent variable, on Student Engagement and Student Satisfaction, the dependent variables. It explores the interconnected relationships among these factors, emphasizing how integrating technology-enhanced teaching methods influences students' participation, motivation, and overall learning experience.

Blended learning instruction integrates in-person classroom instruction with online learning activities in a purposeful, integrated way. Hence, learners benefit from both modalities' flexibility, targeted digital practice, and human interaction for higher-order tasks. Recent studies frame blended learning as a pedagogical design (not just technology) that intentionally sequences online and in-person tasks to see learning goals (Finlay et al., 2022). Blended learning has evolved into a transformative approach that reshapes traditional teaching by promoting learner-centered instruction and active participation.

Using digital platforms, students can interact with course content at their own speed while still taking advantage of in-person conversations and group projects. This strategy provides personalized learning experiences that meet the needs of a wide range of students while also improving accessibility and flexibility (Norberg et al., 2023). This strategy enables customized learning experiences that meet the needs of a wide range of students while also improving accessibility and flexibility. According to Norberg et al. (2023), blended learning improves learning outcomes and promotes deeper engagement by offering opportunities for introspection, interaction, and knowledge application across a variety of settings. Therefore, when done well, blended learning serves as a link between pedagogy and technology, enhancing the quality and satisfaction of the educational process.

Student engagement is the degree to which students devote psychological (what they do), cognitive (how deeply they think), emotional (how they feel), and agentic/social (how they participate) resources to learning activities across in-person and virtual settings. Engagement in blended settings, therefore, includes both

observable online behaviors (e.g., LMS activity, forum posts, video viewing) and in-class participation, motivation, and self-regulated learning that bridge the two modalities (Chiu, 2021). Additionally, instructional design, technology usability, and the quality of teacher-student interaction all affect student engagement in blended learning contexts. Students' levels of engagement tend to increase when there is a smooth transition between online and in-person components because learning activities become more relevant, autonomous, and collaborative. Studies show that well-designed blended courses foster higher behavioral and cognitive engagement by allowing learners to control their pace and access diverse learning materials while maintaining meaningful social interactions in class (Kahu et al., 2023). Furthermore, emotional and agentic engagement are enhanced when instructors create a sense of community and provide prompt Feedback through digital platforms, promoting students' sense of belonging and ownership of learning (Martin et al., 2022). Thus, student engagement in blended learning is not only a function of individual motivation but also the product of intentional pedagogical integration between digital and physical learning spaces.

Academic engagement, which reflects students' active participation in learning activities; cognitive engagement, which includes the mental effort and investment in understanding complex ideas; emotional engagement, which relates to students' affective reactions toward learning; social engagement, which focuses on interactions and collaboration with peers and teachers; and technological engagement, which highlights the effective use of digital tools to enhance learning experiences, are all important aspects of student engagement that together shape learners' overall participation and success in the educational process.

Behavioral engagement refers to the observable actions people take that show they are participating in a task or content in classrooms. This means attending, on-task behavior, participating in discussion, completing assignments; in workplaces, it is attendance, discretionary effort, task persistence, and active contribution. This construct is often treated alongside cognitive and emotional engagement, but is the one most directly tied to measurable behavior (Li & Xue, 2023). In addition, behavioral engagement is not just a checklist of observable acts (attendance, hand-raising, assignment completion); recent studies emphasize that it functions as the primary *vehicle* through which learning and workplace outcomes are produced (Laranjeira et al., 2025). Meta-analytic evidence shows that behavioral engagement (effort, persistence, on-task behavior) is the strongest predictor of achievement relative to emotional, cognitive, and agentic engagement, meaning that these observable behaviors reliably mediate gains in grades, skill acquisition, and measurable performance. In other words, behavioral engagement often *drives* achievement because it represents sustained effort and time-on-task that underpin learning progress (Reeve et al., 2025)

Cognitive engagement is a learner's psychological investment, the mental effort, strategies, and deep processing someone brings to a task (not just attendance or activity). Contemporary work often places it alongside behavioral and emotional engagement and emphasizes depth, constructive vs. passive activity (Dubovi & Tabak, 2021). Cognitive engagement refers to a learner's *active, strategic investment* of mental effort in understanding, integrating, and applying material, rather than merely being present or clicking through activities.

Contemporary work emphasizes that cognitive engagement is multi-layered and can be operationalized through observable learning behaviors **only when** those behaviors are mapped to theory (e.g., ICAP, Community of Inquiry) and to evidence of deep processing (e.g., reflection, generating explanations, problem solving). In digital contexts, scholars show cognitive engagement is best measured with a mix of trace data (clickstreams, IDE actions), self-reports about strategy use and metacognition, and qualitative indicators (explanations, forum argumentation), because relying on behavioral traces alone (time on task, clicks) risks conflating *activity* with *thinking* (Bergdahl et al., 2024). According to recent research, AI-based analytics in adaptive learning environments can enhance cognitive engagement by providing tailored feedback loops that encourage introspection and metacognitive control, leading to deeper learning outcomes (Zheng et al., 2024).

Social engagement in blended learning relates to how students engage, feel connected, and participate cooperatively in both in-person and virtual course components. It overlaps with the idea of social presence (feeling "real" or connected to others online). Strong social engagement fosters a sense of belonging that supports motivation and deeper learning (Kreijns et al., 2024). In addition, social engagement in blended learning not only creates opportunities for task-related interaction but also serves as a social scaffolding system

that supports cognitive and motivational processes: frequent peer exchange, collaborative problem-solving, and low-stakes social talk reduce psychological distance and create the trust needed for risk-taking and deep discussion.

Students are more likely to share tentative ideas, ask for Feedback, and participate in transactive dialogue that propels knowledge construction when they believe that their teachers and peers are "real" and responsive in both synchronous and asynchronous channels. This mechanism has been demonstrated in recent empirical work to mediate the relationships among social interaction, learning efficiency, and engagement (Gao, 2024). Recent studies also indicate that sustained social engagement enhances persistence and course completion rates in blended environments by reinforcing peer accountability and emotional support networks (Zhang & Chen, 2025).

Emotional engagement refers to how students' emotional responses to learning—interest, enjoyment, boredom, anxiety, and belonging—shape their motivation, focus, and perseverance. In blended learning, the mix of face-to-face and online modalities, emotional engagement is distinct but interdependent with behavioral and cognitive engagement (Li & Xue, 2023). Encouraging students' emotional engagement through prompt Feedback, interactive exercises, and a feeling of community makes blended learning more comprehensive and successful (Fredricks et al., 2004). According to Zhang et al. (2024), emotional engagement, alongside intrinsic motivation and psychological capital, significantly predicted students' academic performance in blended courses.

Qualitative findings also show that emotional engagement fluctuates due to sociocultural factors, peer interactions, and comfort with technology, thereby affecting students' overall participation in learning (Huang & Wang, 2023). These results highlight that emotional engagement serves as a bridge between the structural design of blended learning and students' behavioral participation and cognitive investment, reinforcing the need for educators to foster supportive, emotionally engaging hybrid environments.

Technological engagement in blended learning is the degree to which learners interact with, and because of educational technologies (LMS, video/synchronous tools, multimedia-authoring tools, learning-analytics dashboards, AI/assistants, etc.) in ways that support behavioral (participation), cognitive (deep thinking), affective (motivation/connectedness), and academic outcomes. It is not just "time in the system," it is how technology is used to enable pedagogy, instructor presence, collaboration, Feedback, and self-regulation (Ashraf et al., 2021). Technological engagement should be treated as a *multifaceted, design-driven* construct, not a passive by-product of putting course material online. Beyond "time in the system," recent work stresses *how* features are used: adaptive/personalized pathways, prompt feedback loops, multimodal materials that invite active construction, and instructor scaffolding that make online interactions meaningful, all of which raise behavioral, cognitive, and affective engagement simultaneously.

Recent studies also highlight the growing role of generative artificial intelligence and learning analytics in fostering individualized engagement patterns and enhancing learner autonomy in blended contexts (Nguyen & Lee, 2024). Evidence from recent syntheses shows that well-designed blended interventions produce moderate-to-high effects on those engagement dimensions when technology is deliberately aligned with pedagogy and instructor presence (Johar et al., 2023).

Satisfaction in blended learning is students' overall affective assessment of a blended (in-person + online) course, including how happy, content, or satisfied they are with the combined learning experience, including the course design, instruction, technology, interactions, and results. It is typically measured as a self-reported score (Likert items) that reflects students' perceived usefulness, ease of use, teaching quality, learning climate, and whether the course met their expectations (Cao, 2023). While discipline-specific studies (e.g., nursing) highlight how practical enablers, such as reliable internet access, instructor presence, clear course management, and students' digital literacy, strongly influence satisfaction and, in turn, the effectiveness of blended designs (Hassan et al., 2024). Additionally, recent studies highlight that learner happiness in blended learning environments is increasingly dependent on the customization of learning pathways and the incorporation of AI-driven feedback systems that enhance perceived support and engagement (Li & Chen, 2025). For educators and institutions, this means satisfaction should be treated not as a "nice-to-have" feeling

but as a measurable quality metric: investing in robust instructional design, faculty development for online facilitation, equitable tech access, and mechanisms for timely interaction/feedback will raise satisfaction scores that are linked to better learning outcomes and student retention. Furthermore, satisfaction with blended learning is a multidimensional construct that encompasses several interrelated factors that contribute to students' overall positive learning experience. Among these, instructor presence and feedback, the technology platform, and a supportive learning environment are critical components that determine how satisfied learners are with blended instruction.

Instructor presence & Feedback (also referred to as "teaching presence" in the Community of Inquiry framework) is the collection of teacher-led activities that plan, coordinate, support, and guide learning in mixed environments so that students feel connected and steered. Feedback is the instructor's information to learners about their performance or understanding. When done well, it builds teaching presence, supports self-regulation, and increases engagement and learning (Moore & Miller, 2022).

In addition, instructor presence and Feedback are foundational to learners' sense of connection, guidance, and motivation; when instructors maintain consistent visibility through active facilitation, timely Feedback, and personalized communication, students perceive higher satisfaction and engagement levels (Martin et al., 2023). According to Roque-Hernández et al. (2024), instructor presence and timely, constructive feedback are the strongest direct predictors of students' overall satisfaction. Studies report that a visible teaching presence and regular instructor interaction increase perceived learning, engagement, and satisfaction by reducing transactional distance and strengthening social presence.

With *a* blended learning technology platform, educators can create, deliver, and oversee both online and in-person learning experiences by integrating content delivery, communication, assessment, and analytics tools. This integrated digital environment is typically built around a Learning Management System (LMS) and associated applications (Ashraf et al., 2021). It is the central medium through which learning occurs, shaping usability, accessibility, and interaction quality. An intuitive, stable, and user-friendly platform promotes seamless learning experiences that enhance satisfaction, while poor technological design often leads to frustration and disengagement (Rasheed et al., 2023). Platforms that are deemed user-friendly and pedagogically supportive increase emotional and cognitive engagement, which in turn mediates the relationship between platform satisfaction and both direct and indirect technology benefits (Chen et al., 2023).

A supportive learning environment in blended learning is an intentionally designed combination of psychological, social, technical, and instructional supports (online and face-to-face) that enable learners to engage, feel safe and capable, access resources, and achieve learning goals. It promotes collaboration, motivation, and inclusivity by ensuring that both digital and face-to-face components are accessible and meaningful. Moreover, it fosters learner autonomy and resilience by providing timely Feedback, clear guidance, and opportunities for active participation (Rusticus et al., 2022). It is also characterized by psychological safety, a collaborative culture, and institutional or peer support, which foster belonging and reduce the stress commonly associated with online components (Dinh & Nguyen, 2024).

Furthermore, a supportive learning environment (clear course design, opportunities for peer interaction, and an inclusive climate) amplifies the positive effects of both instructor presence and a well-designed platform. When students experience a sense of community and scaffolding across face-to-face and online components, satisfaction rises, and engagement improves (De Bruijn-Smolders et al., 2024). When taken as a whole, these concepts show that students' pleasure in blended learning reflects the quality and coherence of the instructional, technological, and social aspects of the learning process rather than just an emotional reaction.

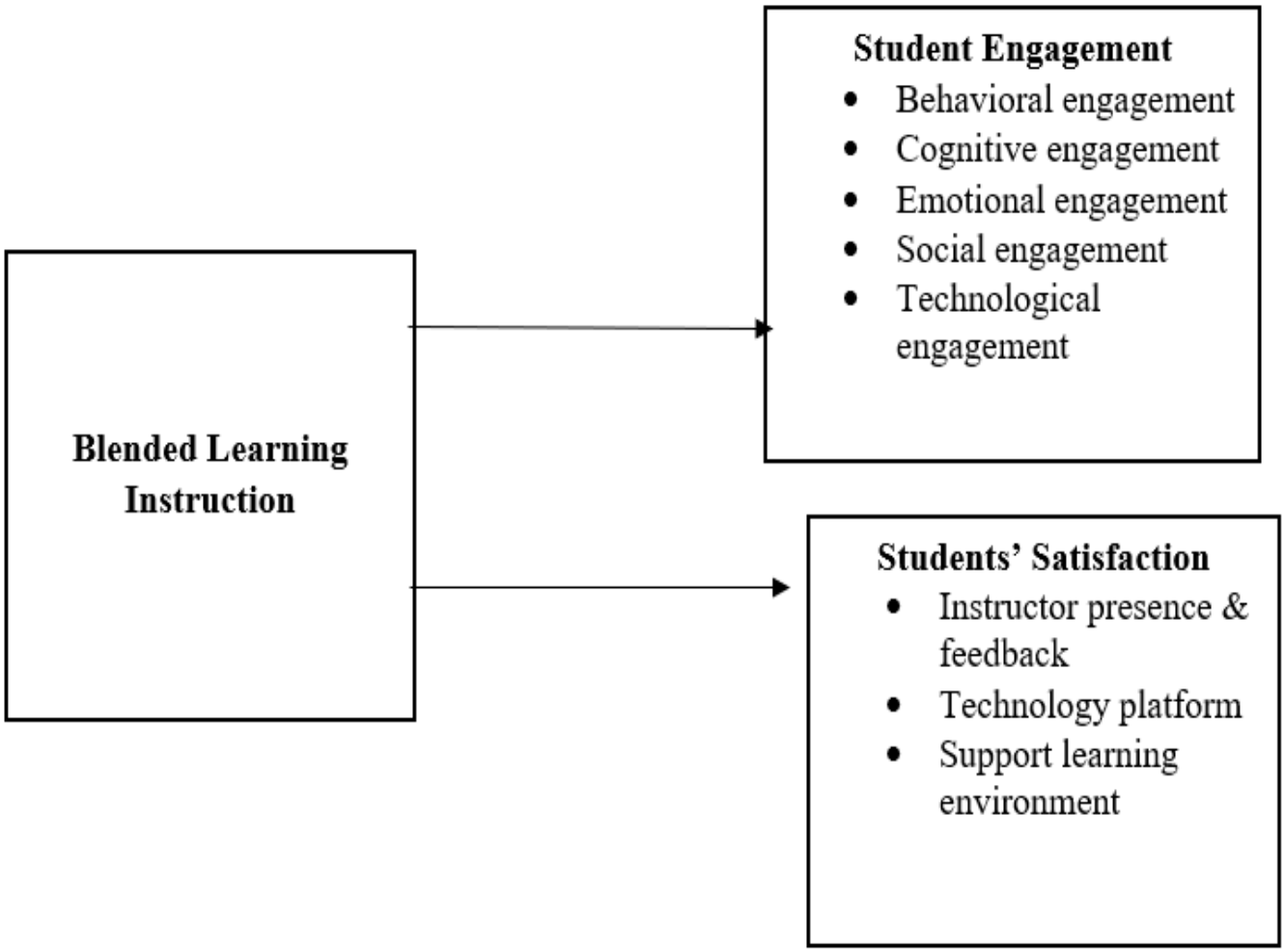

Figure 1. Schematic Diagram of the study

Statement of the Problem

This study aimed to examine blended learning instruction relation to the engagement and satisfaction of criminology students in one of the Higher Educational Institutions in Ozamiz City. Specifically, it sought to answer the following questions:

1. What is the extent of utilization blended learning instruction?

2. What is the level of engagement of criminology students in blended learning instruction in terms of behavioral engagement, cognitive engagement, emotional engagement, social engagement, and technological engagement?
3. What is the level of satisfaction of criminology students in blended learning instruction in terms of instructor presence & feedback, Technology platform, and Support learning environment?
4. Is there significance relationship between the level of blended learning instruction and the students' satisfaction.
5. Is there significance relationship between the level of blended learning instruction and the students' engagement.

Null Hypothesis

Ho1: There is no significant relationship between blended learning instruction and students' engagement.

Ho2 : There no significant relationship between blended learning instruction and students' satisfaction.

RESEARCH METHODOLOGY

Design

This study utilized a descriptive-correlational research design, a quantitative approach that seeks to describe variables and determine their relationships without manipulating the factors involved. It provided a detailed account of the current status of the variables under study and examined whether they were related and, if so, to what extent (Creswell & Creswell, 2018). As such, it sought to assess whether there was a statistical relationship among three variables: blended learning instruction, level of engagement, and level of satisfaction in criminology programs among respondents.

A descriptive approach was used to present the existing conditions of blended learning in criminology programs, including how it was implemented and the levels of student engagement and satisfaction. A correlational design was also applied to examine the relationships among these variables, determining whether more effective blended learning practices were associated with higher engagement and satisfaction among criminology students.

Setting

This study was conducted in one of the Higher Education Institutions in Misamis Occidental. It was a private institution of learning. It offered a variety of academic programs, including the College of Criminology. Some of these programs had reached different levels of accreditation. It was a community of learners that participated in transforming society in the spirit of the Gospel through innovations in human and Christian education, research, and community and institutional partnerships.

Respondents

The respondents in the study were 135 students currently enrolled in the criminology program during the 1st semester of A.Y. 2025-2026. They were chosen regardless of age, sex, and year level through stratified sampling. The criteria for choosing the respondents are: (1) officially enrolled in the criminology program, (2) willing to participate in the study.

Instruments

The following instruments were used in this study:

A. Blended learning instruction, which utilized a researcher-made questionnaire. To ensure the validity and reliability of the test, the instrument was subjected to pilot testing among respondents who were not included in the study. The Cronbach's Alpha during the instrument's pilot testing was 0.706. The questionnaire consisted of 10 questions per construct. The following scale was used to determine the extent of blended learning instruction use among criminology students at one of the higher education institutions in Misamis Occidental.

Responses	Continuum	Interpretation
4 – Always (A)	3.40-4.00	Very Great Extent
3- Often (O)	2.60-3.39	Great Extent
2- Sometimes (S)	1.800-2.59	Less Extent
1- Neve (N)	1.00-1.79	Least Extent

B. Student Engagement. A researcher-made questionnaire was used. To ensure the validity and reliability of the instrument, it was subjected to pilot testing among respondents who were not included in the study. The Cronbach's Alpha obtained during the instrument's pilot testing was 0.712. The questionnaire consisted of the following constructs: behavioral engagement, cognitive engagement, emotional engagement, social

engagement, and technological engagement, with ten (10) questions for each construct. The following scale was used to determine the level of satisfaction in blended learning instruction among criminology students in one of the higher education institutions in Misamis Occidental.

Responses	Continuum	Interpretation
4- Always (A)	3.40-4.00	Very Highly Engaged (VHE)
3- Often (O)	2.60-3.39	Highly Engaged (HE)
2- Sometimes (S)	1.80-2.59	Less Engaged (LE)
1- Never (N)	1.00-1.79	Least Engaged (LE)

C. Student Satisfaction. A researcher-made questionnaire was used. To ensure the instrument's validity and reliability, it was pilot-tested with respondents who were not included in the main study. The required Cronbach's Alpha obtained during the instrument's pilot testing was at least 0.70. The questionnaire consisted of the following constructs: instructor presence and Feedback, technology platform, and supportive learning environment, each with 10 questions. A rating scale was used to determine the level of satisfaction in blended learning instruction among criminology students in one of the higher education institutions in Misamis Occidental.

Responses	Continuum	Interpretation
4 – Strongly Agree (SA)	3.40-4.00	Very High (VH)
3- Agree (A)	2.60-3.39	High (H)
2- Disagree (D)	1.80-2.59	Low (L)
1- Strong Disagree (SD)	1.00-1.79	Very Low (VL)

Data Gathering Procedure

Once the researcher obtained the Graduate School Dean's clearance and accreditation to conduct the study, data collection began. The researcher then requested permission to administer the survey questionnaires to the students in a letter to the dean of the College of Criminal Justice Education. Following approval, the researcher met with the targeted respondents to go over the study's goals and methodology. Additionally, as part of the procedure, the researcher got the students' consent. Following the respondents' confirmation of their involvement, the researcher arranged for the survey questionnaires to be distributed at the time and date of their choice; the study only required a few minutes to complete. The researcher checked the responses to ensure the data were complete after retrieving the instruments. To perform statistical analysis and interpretation, the data were finally totaled and tabulated.

Ethical Considerations

The voluntariness of the respondents' participation was the main emphasis of the measures used in this study. The researcher adhered to the university's ethical standards. After completing the required paperwork, such as the Ethical Review Assessment Form, Informed Consent Form, and Technical Review of the Research Proposal, the paper was approved by the Ethics Committee (MUREC). Respondents gave their consent for the researcher to conduct interviews and ask questions after being properly briefed about the study. The researcher received a letter of approval for the project from the Graduate School Dean prior to data collection. The study's goals were clearly stated by the researcher, who also gave participants enough time to decide whether to take the survey. The respondents were informed of their right to refuse to participate if they felt threatened or uncomfortable. When there was doubt, the researcher gave ample opportunities to explain the purpose and

scope of the investigation. To protect respondents' right to personal security, especially their right to privacy, the researcher complied with Republic Act No. 10173, commonly known as the "Data Privacy Act of 2012."

Data Analysis

The researchers used the following statistical methods to evaluate and interpret the collected data.

Weighted Mean and Standard Deviation were used to determine the extent of blended learning instruction utilization, as well as the level of engagement and satisfaction of criminology students toward it.

Pearson Product–Moment Correlation was used to determine the significant relationships among respondents' extent of blended learning instruction use, level of engagement, and level of satisfaction among criminology students.

RESULT AND DISCUSSION

Extent of utilization blended learning instruction

Table 1 presents the extent of utilization of blended learning instruction in criminology programs. The result shows a mean score of M = 3.67 (SD = 0.523), which falls within the Very Great Extent category on the given scale. This indicates that blended learning strategies are consistently and extensively implemented in the delivery of criminology courses. The high mean score indicates that instructors frequently integrate online learning elements, including learning management systems, digital learning resources, online tests, and virtual chats with in-person instruction. The comparatively low standard deviation suggests that students' perceptions of the extensive use of blended learning strategies across all their courses are consistent.

Recent studies support these findings, emphasizing that blended learning has become a dominant instructional model in higher education, particularly in professional and applied programs. Garrison and Vaughan (2021) assert that blended learning enhances instructional flexibility while maintaining pedagogical rigor through purposeful integration of online and in-person learning experiences. Similarly, Bond et al. (2021) and Rasheed et al. (2022) note that institutions have sustained blended learning practices beyond emergency remote teaching because of their effectiveness in supporting student engagement and continuity of learning.

In the context of criminology programs, the widespread use of blended learning is particularly relevant, as courses often require integrating theoretical discussions, practical applications, case-based learning, and digital resources. Studies indicate that blended learning environments support experiential learning and applied skills development by providing access to simulations, digital case repositories, and interactive learning activities (Schindler et al., 2023; Al-Emran & Teo, 2022).

The widespread use of blended learning instruction indicates that criminology programs have successfully institutionalized it as a core pedagogical approach rather than a temporary or supplementary strategy. Since regular exposure to blended learning settings helps students gain familiarity, adaptability, and effective learning strategies, this widespread deployment offers a solid foundation for improving student engagement and well-being (De Bruijn-Smolders & Prinsen, 2024; Marisga, 2025). The results propose that academic leaders and faculty should continue refining blended learning designs by emphasizing pedagogical alignment, interactive learning activities, and meaningful assessment practices. Additionally, maintaining the quality and efficacy of blended learning delivery requires ongoing investment in digital infrastructure and in educators' professional development (Marisga, 2025). Criminology programs can better support a range of learning requirements, encourage active learning, and improve overall educational outcomes by continuing to use blended learning extensively.

Anchored in the Community of Inquiry (CoI) Framework of Garrison, Anderson, and Archer (2000), the results show that the blended learning environment in the criminology program effectively cultivates cognitive, teaching, and social presence. Students' positive perceptions reflect instructional practices that thoughtfully combine online and face-to-face learning, demonstrating strong teaching presence through clear organization,

purposeful activities, and guided facilitation. This intentional design supports cognitive presence by allowing learners to think critically, reflect on ideas, and apply criminological concepts through varied learning tasks across platforms. At the same time, students' shared experiences point to a supportive learning atmosphere where interaction, collaboration, and a sense of belonging are encouraged, thereby strengthening social presence. Together, these results highlight how well-implemented blended learning creates a connected and engaging educational experience that aligns with the CoI Framework and promotes meaningful learning among criminology students. This suggests that institutions aiming to enhance student engagement and learning outcomes in criminology or similar fields should consider adopting thoughtfully structured blended learning approaches, as they not only foster knowledge acquisition but also build a collaborative and inclusive learning community.

Table 1 Extent of Utilization Blended Learning Instruction

Strategies	M	SD	Remarks
Blended Learning Instruction	3.67	0.523	Very Great Extent

Legend: 3.25-4.0 (Very Great Extent); 2.50-3.24 (Great Extent);

1.75-2.499(Less Extent); 1.0-1.74 (Least Extent)

Level of Engagement of Criminology students

Table 2 presents the level of student engagement in blended learning across five dimensions: behavioral, cognitive, emotional, social, and technological engagement. The results reveal that all engagement dimensions received "Very Highly" ratings, with an overall engagement mean (M = 3.622; SD = 0.5572). This indicates that blended learning instruction is highly effective in fostering multidimensional engagement among criminology students.

Behavioral engagement recorded the highest mean (M = 3.65, SD = 0.528), interpreted as Very Highly. This suggests that students actively participate in blended learning activities, including attending classes, completing tasks, and complying with course requirements. The blended learning structure, combining face-to-face interaction with online components, appears to promote consistent participation and task completion. Recent studies affirm that blended learning enhances behavioral engagement by offering flexibility while maintaining accountability through scheduled in-person sessions and online assessments (Bond et al., 2021; Kahu et al., 2022). In criminology programs, where coursework often involves applied activities such as case analyses and simulations, blended formats encourage active involvement.

Cognitive engagement obtained a very high rating (M = 3.59, SD = 0.586), indicating that learners put effort into comprehending difficult ideas, using techniques, and engaging in higher-order thinking. This reflects students' willingness to exert mental effort in learning criminological theories, legal frameworks, and analytical processes. According to research (Garrison & Vaughan, 2021; Panadero et al., 2023), blended learning environments encourage deeper learning by enabling students to review information asynchronously and participate in reflective, self-paced learning. By promoting autonomy and self-regulated learning, two essential components of professional programs like criminology, blended learning enhances cognitive engagement.

The emotional engagement dimension yielded a very high rating (M = 3.62, SD = 0.544), which means that, in integrated learning environments, students experience positive emotions such as motivation, curiosity, and enjoyment. Since it affects students' perseverance and contentment with their educational experiences, emotional involvement is crucial. Recent research highlights that blended learning environments enhance emotional engagement by reducing learning monotony and providing varied instructional formats (Martin et al., 2022; Rasheed et al., 2022). In criminal justice education, engaging multimedia resources and interactive discussions may help sustain students' interest and emotional connection to the course. Social engagement also registered a very high rating (M = 3.64, SD = 0.563), suggesting that students actively interact with peers and

instructors through both online and face-to-face platforms. Blended learning enables collaboration through discussion forums, group projects, and synchronous sessions, fostering a sense of academic community. This result aligns with studies emphasizing that blended learning strengthens social presence and peer interaction when designed with collaborative learning strategies (Dixson et al., 2021; Schindler et al., 2023). Social engagement is particularly important in criminology programs, where collaborative problem-solving and ethical discussions are integral to learning.

Technological engagement had a very high rating (M = 3.61, SD = 0.565), indicating students' active and assured use of digital tools and platforms in blended learning. This implies that technology is an essential part of students' learning involvement rather than just a means of delivery. Effective technological integration in blended learning contexts improves students' interaction with course materials and fosters sustained engagement, in line with current findings (Al-Emran & Teo, 2022; Scherer et al., 2023). In criminology education, technological engagement supports access to digital case files, learning management systems, and online assessments.

The very high level of engagement among criminology students suggests that blended learning instruction is an effective pedagogical approach for promoting active participation, deep learning, and positive learning experiences. The results suggest that when face-to-face instruction is strategically combined with well-designed online components, students are more motivated, cognitively involved, emotionally connected, socially interactive, and technologically engaged. For criminology programs, this underscores the importance of sustaining and further enhancing blended learning designs that emphasize interactive activities, collaborative learning, and meaningful technology integration. Higher education institutions should invest in faculty development and instructional design support to ensure that blended learning environments continue to foster engagement and, ultimately, student satisfaction and academic success. These findings also support including student engagement as a key outcome variable in evaluating the effectiveness of blended learning in criminology education.

These findings demonstrate that students are gradually driven to participate in a variety of ways, beyond actively engaging in blended learning activities. According to Deci and Ryan's (2000) Self-Determination Theory (SDT), students' high levels of behavioral, cognitive, emotional, social, and technological involvement indicate that they feel competent, related, and autonomous in the classroom. They are demonstrating that the blended approach successfully fosters internal motivation and supports sustained engagement by making deliberate learning decisions, working meaningfully with peers, expressing genuine interest and positive emotions, and navigating digital tools with confidence.

Table 2 Level Of Engagement of Criminology Students

Strategies	M	SD	Remarks
Behavioral Engagement	3.65	0.528	Very Highly
Cognitive Engagement	3.59	0.586	Very Highly
Emotional Engagement	3.62	0.544	Very Highly
Social Engagement	3.64	0.563	Very Highly
Technological Engagement	3.61	0.565	Very Highly
Overall Engagement	3.622	0.5572	Very Highly

Legend: 3.25-4.0 (Very Highly); 2.50-3.24 (Highly);

1.75-2.499(Less); 1.0-1.74 (Least)

Level of Satisfaction of Criminology students

Table 3 presents the level of student satisfaction with blended learning instruction in criminology programs across three dimensions: instructor presence and Feedback, technology platform, and support learning environment. The findings reveal that all dimensions were rated very high, with an overall satisfaction rating (M = 3.63; SD = 0.60), indicating that students are highly satisfied with their blended learning experiences.

The construct Instructor Presence and Feedback obtained the highest mean score (M = 3.71, SD = 0.556), interpreted as very high. This implies that in blended learning settings, students view their teachers as actively involved, accommodating, and supporting. Enhancing student happiness requires an effective instructor presence, which is demonstrated by prompt Feedback, clear instructions, and meaningful interaction. This result aligns with prior research showing that, in blended and online learning environments, instructor presence is one of the best indicators of student satisfaction. (Martin et al., 2022; Richardson et al., 2021). In criminology programs, where complex concepts, ethical issues, and applied case analyses are common, instructor feedback is essential in guiding students' understanding and sustaining motivation.

The Technology Platform dimension recorded a very high rating (M = 3.61, SD = 0.604), indicating that students are satisfied with the reliability, accessibility, and usability of the digital platforms used in blended learning. This suggests that learning management systems, online resources, and digital communication tools are effectively supporting instructional delivery. Recent literature supports this result, highlighting that ease of use, system reliability, and platform functionality significantly influence students' satisfaction and continued engagement in blended learning environments (Al-Emran & Teo, 2022; Scherer et al., 2023). For criminology students, access to digital case materials, recorded lectures, and online assessments enhances convenience and continuity of learning.

The Support Learning Environment construct also achieved a very high rating (M = 3.58, SD = 0.635), indicating that students feel supported by institutional services, learning resources, and the overall learning climate. This includes access to academic support, technical assistance, and a conducive learning environment that facilitates blended learning. This result is consistent with research demonstrating that students' satisfaction and persistence in blended learning programs are significantly influenced by institutional support and a pleasant learning environment (Kahu et al., 2022; Rasheed et al., 2022). In criminology education, adequate support mechanisms help students navigate both academic and technological demands.

The very high level of satisfaction among criminology students implies that blended learning instruction effectively meets learners' academic and support needs. Even in technologically improved learning environments, the importance of the instructor's job is highlighted by the prominence of their presence and input. According to these results, criminology programs should retain strong institutional support structures, dependable and user-friendly digital platforms, and high levels of faculty engagement. By doing this, blended learning can strengthen engagement, motivation, and academic achievement in addition to increasing student pleasure. High satisfaction levels also encourage the long-term use and ongoing development of blended learning strategies in the teaching of criminology.

The result signifies that criminology students genuinely value the blended learning experience, particularly the active engagement and guidance provided by instructors, which aligns with the Expectancy-Disconfirmation Theory (EDT) by Oliver (1980). Students' strong appreciation for instructor presence and timely Feedback indicates that their expectations for supportive and responsive teaching are being met or even exceeded. Similarly, the positive perceptions of the technology platform and the learning environment show that students find the tools accessible and the setting conducive to learning, reinforcing their sense of satisfaction. This alignment between expected and actual learning experiences highlights how effectively the blended learning approach addresses student needs, confirming that when educational offerings meet or exceed expectations, overall satisfaction and motivation to engage are strengthened.

Table 3 Level of Satisfaction of Criminology Students

Strategies	M	SD	Remarks
Instructor Presence & Feedback	3.71	0.556	Very High
Technology Platform	3.61	0.604	Very High
Support Learning Environment	3.58	0.635	Very High
Overall Satisfaction	3.63	0.6	Very High

Legend 3.25-4.0 (Very High); 2.50-3.24 (High);

1.75-2.499(Low); 1.0-1.74 (Very Low)

Relationship Between Blended Learning Instruction and Student Engagement

Table 4 presents the results of the correlation analysis examining the relationship between the level of blended learning instruction and various dimensions of students' engagement. The findings indicate that blended learning instruction has a statistically significant relationship with all engagement dimensions, as reflected by p-values less than .001, leading to the rejection of the null hypothesis in all cases. The Correlation between blended learning instruction and behavioral engagement is positive and statistically significant ($r = 0.086$, $p < .001$). Although the relationship is weak, the results suggest that increased use of blended learning strategies is associated with higher levels of student participation, task completion, and adherence to course requirements.

This result is consistent with research demonstrating that blended learning settings encourage regular student involvement by balancing flexibility and structured in-person interactions (Bond et al., 2021; Kahu et al., 2022). Even modest correlations are meaningful in educational settings, particularly when multiple contextual and individual factors influence behavioral engagement.

The strongest relationship was observed between blended learning instruction and cognitive engagement ($r = 0.661$, $p < .001$), indicating a strong and extremely substantial positive association. This implies that students' commitment to comprehending course material, using learning strategies, and using higher-order cognitive processes is significantly increased by blended learning. Recent research, which highlights how blended learning promotes deeper cognitive processing through self-paced online resources, reflection exercises, and problem-based learning tasks, provides strong support for this conclusion (Garrison & Vaughan, 2021; Panadero et al., 2023). In criminology programs, blended learning may particularly support analytical reasoning and critical evaluation of cases and theories.

The relationship between blended learning instruction and emotional engagement was positive and statistically significant ($r = 0.115$, $p < .001$). This indicates that blended learning is associated with positive learning-related emotions such as interest, enjoyment, and motivation, although the relationship strength is relatively weak. Previous studies indicate that varied instructional formats and interactive digital content in blended learning environments can reduce learner boredom and strengthen students' emotional connection to learning activities (Martin et al., 2022; Rasheed et al., 2022). Although learners' personal interests and motivation often influence emotional engagement, it can be significantly enhanced through well-designed blended learning experiences.

A statistically significant positive relationship was found between blended learning instruction and social engagement ($r = 0.076$, $p < .001$). Although the Correlation is weak, the result indicates that blended learning has a measurable contribution to students' social engagement. This suggests that when face-to-face instruction is combined with online components, students have more opportunities for interaction and collaboration. The finding aligns with previous studies showing that well-designed blended learning environments enhance social presence through structured discussion forums, collaborative group activities, and purposeful in-person interactions (Richardson et al., 2021; Schindler et al., 2023). In the context of criminology education, such interactive opportunities are particularly important, as peer discussion and collaborative case analysis support social learning and the development of professional perspectives.

The Correlation between blended learning instruction and technological engagement was positive and statistically significant ($r = 0.075$, $p < .001$). This implies that greater exposure to blended learning increases students' active use of digital tools and platforms, reinforcing their engagement with technology as a learning medium. This result aligns with studies demonstrating that consistent integration of technology in instruction enhances students' comfort, interaction, and engagement with digital learning tools (Al-Emran & Teo, 2022; Scherer et al., 2023).

The significant relationships between blended learning instruction and students' engagement suggest that blended learning is a critical instructional approach for fostering meaningful, multidimensional engagement in criminology education. The strong association with cognitive engagement highlights blended learning's capacity to promote deep learning, critical thinking, and analytical skills—core competencies in criminology programs. Although behavioral, emotional, social, and technological engagement showed weaker relationships,

their statistical significance underscores the cumulative impact of blended learning on students' overall learning experience. These findings suggest that educators should design blended learning environments that go beyond content delivery by incorporating interactive, reflective, and collaborative activities to strengthen engagement across all dimensions. Institutional support for instructional design, faculty training, and technology infrastructure is therefore essential to maximize the engagement benefits of blended learning and enhance students' satisfaction and academic success.

The results highlight that blended learning instruction meaningfully influences various aspects of student engagement, particularly in enhancing cognitive processes. The strong association with cognitive engagement suggests that integrating digital and traditional teaching approaches effectively supports students' critical thinking, comprehension, and deeper learning experiences. While connections with behavioral, emotional, social, and technological engagement are comparatively weaker, they remain significant, indicating that blended learning continues to positively impact students' participation, motivation, interpersonal interaction, and comfort with technology.

Table 4 Significant Relationship Between the Level of Blended Learning Instruction and the Students' Engagement.

Variables	*r* value	*p* value	Decision
Blended Learning Instruction and			
Behavioral Engagement	0.086	< .001	Reject Ho
Cognitive Engagement	0.661	< .001	Reject Ho
Emotional Engagement	0.115	< .001	Reject Ho
Social Engagement	0.076	< .001	Reject Ho
Technological Engagement	0.075	< .001	Reject Ho

Ho: There is no significant relationship between the level of blended learning instruction and the students' satisfaction.

Note: Probability Value Scale: **p<0.01 (Highly Significant); *p<0.05 (Significant); p>0.05 (Not significant)

Relationship Between Blended Learning Instruction and Student Satisfaction

Table 5 presents the results of the correlation analysis examining the relationship between the level of blended learning instruction and students' satisfaction across three dimensions: instructor presence and Feedback, technology platform, and support learning environment. The findings indicate that blended learning instruction has a statistically significant relationship with all satisfaction dimensions, as evidenced by p-values less than .001, leading to the rejection of the null hypothesis in all cases. The relationship between blended learning instruction, instructor presence, and Feedback is positive and statistically significant ($r = 0.043$, $p < .001$). Although the correlation coefficient indicates a weak relationship, the result suggests that increased utilization of blended learning strategies is associated with improved perceptions of instructor availability, guidance, and Feedback.

This finding supports the existing literature, which emphasizes that blended learning environments allow instructors to extend their presence beyond face-to-face sessions through online consultations, timely digital Feedback, and continuous communication (Richardson et al., 2021; Martin et al., 2022). In criminology programs, where clarification of complex theories and ethical considerations is crucial, even modest improvements in perceived instructor presence can significantly influence students' satisfaction.

The Correlation between blended learning instruction and technology platform satisfaction is positive and statistically significant ($r = 0.083$, $p < .001$). This indicates that as blended learning is more extensively implemented, students tend to report higher satisfaction with the digital platforms used for instruction. This result aligns with studies showing that frequent and consistent use of learning management systems and digital tools improves students' familiarity, perceived ease of use, and satisfaction with technology platforms (Al-

Emran & Teo, 2022; Scherer et al., 2023). In criminology education, reliable platforms that support access to case materials, assessments, and communication are essential for positive learning experiences.

A significant positive relationship was also observed between blended learning instruction and the supportive learning environment ($r = 0.063$, $p < .001$). This suggests that greater utilization of blended learning is associated with improved perceptions of institutional support, learning resources, and overall learning conditions. This result aligns with studies showing that incorporating institutional services into digital learning environments can improve students' perceptions of academic and technical support through well-executed blended learning models (Kahu et al., 2022; Rasheed et al., 2022). Access to both technical support and academic supervision is essential for maintaining learning continuity and student happiness in criminology programs.

The significant relationships between blended learning instruction and student satisfaction imply that the continued, systematic implementation of blended learning positively contributes to students' learning experiences in criminology programs. Even though the correlations are modest, their statistical significance highlights the cumulative and reinforcing effects of blended learning on key satisfaction components such as instructor presence, technology platforms, and support learning environments. These findings suggest that institutions should not only maintain blended learning practices but also focus on improving the quality of instructional interaction, platform reliability, and institutional support services. Strengthening these areas can amplify the impact of blended learning on student satisfaction, thereby enhancing engagement, persistence, and overall academic success. For criminology education, this underscores the importance of aligning pedagogical strategies, technological infrastructure, and support systems to ensure that blended learning delivers a consistently satisfying and meaningful educational experience.

The findings suggest that blended learning plays a meaningful role in shaping students' educational experiences, particularly in how they perceive instructor guidance, the technology used, and the overall learning environment. While the relationships are modest, they highlight that students respond positively when instruction effectively integrates both online and face-to-face components. also influences their overall satisfaction.

Table 5 Significant Relationship Between the Level of Blended Learning Instruction and the Student Satisfaction.

Variables	*r* value	*p* value	Decision
Blended Learning Instruction and			
Instructor Presence & Feedback	0.043	< .001	Reject Ho
Technology Platform	0.083	< .001	Reject Ho
Support Learning Environment	0.063	< .001	Reject Ho

Ho: There is no significant relationship between the level of blended learning instruction and the students' satisfaction.

Note: Probability Value Scale: **p<0.01 (Highly Significant); *p<0.05 (Significant); p>0.05 (Not significant)

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

Summary

This study aimed to examine blended learning instruction's relationship to the engagement and satisfaction of criminology students at one of the Higher Educational Institutions in Ozamiz City. Specifically, it sought to answer the following questions: (1) What is the extent of utilization of blended learning instruction? (2) What is the level of engagement of criminology students in blended learning instruction in terms of behavioral engagement, cognitive engagement, emotional engagement, social engagement, and technological engagement? (3) What is the level of satisfaction of criminology students in blended learning instruction in

terms of instructor presence & Feedback, Technology platform, and Support learning environment? (4) Is there a significant relationship between the level of blended learning instruction and the students' satisfaction? (5) Is there a significant relationship between the level of blended learning instruction and the students' engagement?

To examine the relationship between blended learning teaching and the engagement and satisfaction of criminology students at one of the higher education institutions in Ozamiz City, the study employed a descriptive-correlational research design. 135 first-year through fourth-year students who were formally enrolled in the criminology program during the first semester of the academic year 2025–2026 were chosen by stratified sampling to take part in the study. Researcher-developed questionnaires were used to collect data for this study. The data were statistically analyzed using the mean, standard deviation, and Pearson Product-Moment Correlation Coefficient.

Findings

The following are the findings of the study:

1. Criminology students perceived blended learning instruction to a very great extent, indicating that online and face-to-face strategies were consistently and effectively implemented in their courses.

2. Student engagement was very high across behavioral, cognitive, emotional, social, and technological dimensions, indicating that students were highly active, motivated, and connected in blended learning.

3. Blended learning instruction showed a significant positive relationship with student engagement, with the strongest influence on cognitive engagement, suggesting deeper thinking and enhanced learning strategies.

4. Blended learning instruction showed a significant positive relationship with student engagement, with the strongest influence on cognitive engagement, indicating enhanced deeper thinking and learning strategies.

5. A significant but weak relationship was found between blended learning instruction and student satisfaction, suggesting that improved blended learning implementation positively affects students' perceptions of instruction, technology, and learning support.

CONCLUSION

Based on the finding, the following is concluded:

1. The combination of online and offline strategies was frequently and successfully implemented, as evidenced by criminology students' positive perception of blended learning. This implies that students' learning needs were effectively met by the instructional design and delivery strategies, fostering a thorough and flexible learning environment.

2. The behavioral, cognitive, emotional, social, and technological aspects of student involvement show that they were engaged, motivated, and connected in the blended learning setting. This demonstrates how well blended learning promotes comprehensive engagement and ongoing interest in the learning process.

3. Criminology students are satisfied with instructor presence, Feedback, technology platforms, and the overall learning environment in blended learning practices. This outcome underscores the importance of supportive instructional and technological frameworks in enhancing student contentment and the overall learning experience.

4. Blended learning plays a vital role in promoting student engagement, particularly by fostering deeper thinking and effective learning strategies. When thoughtfully designed, blended learning environments support students' critical analysis, problem-solving, and the practical application of knowledge, leading to richer, more meaningful learning experiences.

5. Blended learning instruction contributes to positive student perceptions of instructional quality, technology use, and learning support. Although these components have a significant impact on how students learn, a variety of other factors also affect overall happiness. This emphasizes how crucial it is to continually refine blended learning strategies to better meet students' needs and enhance their overall educational experience.

Recommendations

Based on the finding and conclusion, it is recommended that the following:

1. Institutions sustain and further enhance blended learning implementation in the criminology program by continuously integrating effective online and face-to-face strategies. Regular updating of digital materials, ongoing faculty training, and periodic evaluation should be conducted to ensure the approach remains responsive, flexible, and supportive of students' learning needs.

2. Students are encouraged to remain actively engaged in blended learning by participating consistently, staying motivated, collaborating with peers, and effectively using technological resources to maximize their learning experience.

3. Educators may sustain effective blended learning practices by maintaining strong instructional presence, providing timely Feedback, and utilizing reliable technology platforms to support a positive and engaging learning environment.

4. Commission on Higher Education (CHED) promotes the adoption of well-structured blended learning approaches in higher education institutions. CHED may provide guidelines and faculty development support to ensure blended learning effectively enhances students' cognitive engagement, critical thinking, and problem-solving skills.

5. School University may continue improving blended learning by enhancing instruction, technology, and support systems, while also addressing other factors that influence student satisfaction to maximize engagement and learning outcomes.

6. Future studies may investigate the long-term effects of blended learning on student engagement, satisfaction, and academic performance, explore its impact across different populations and programs, and examine weaker correlations in behavioral, emotional, social, and technological engagement. Additionally, research on innovative blended learning strategies can help optimize engagement and satisfaction in all dimensions.

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