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Hybrid Learning in Higher Education: An Analysis of Online and Face-to-Face Instruction

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ABSTRACT

Anchored in the Technology Acceptance Model (TAM), Community of Inquiry (CoI) Framework, and Constructivist Learning Theory, this quantitative descriptive-correlational study evaluated the effectiveness of the hybrid learning program in General Education courses at the University of Perpetual Help System DALTA–Calamba Campus during AY 2025–2026. Data gathered from 701 students and 21 teaching and non-teaching personnel through structured questionnaires were analyzed using weighted means and Spearman's Rho correlation coefficient. Results indicated high overall satisfaction with institutional support among both students (M = 4.40) and staff (M = 3.71), particularly highlighting strengths in digital learning resources and academic assistance. Respondents perceived hybrid learning as highly beneficial for enhancing scheduling flexibility, content accessibility, and digital skill acquisition. However, significant implementation challenges persisted, most prominently unstable internet connectivity (students, M = 4.10; staff, M = 4.04), device hardware constraints, diminished social interaction, and self-discipline difficulties. Correlation analysis demonstrated a strong positive relationship between institutional support satisfaction and perceived program benefits, alongside a moderate relationship with perceived challenges. The findings confirm that while hybrid education serves as an adaptable and effective instructional model, its long-term viability depends on robust technical infrastructure, ongoing faculty training, and comprehensive student support mechanisms. Ultimately, the study presents the Hybrid Learning Sustainability Plan (HLSP) 2026–2027 to address identified gaps and optimize operational delivery.

Keywords: *Hybrid Learning, General Education, Higher Education, Institutional Support, Technology Acceptance Model (TAM), Community of Inquiry (CoI), Descriptive-Correlational Study, Educational Management*

INTRODUCTION

The rapid shift toward technology-enhanced learning has transformed educational practices worldwide, yet the quality of its implementation varies greatly across institutions. Although hybrid learning had already been utilized in many developed countries prior to the COVID-19 pandemic, its adoption in the Philippines occurred mainly as an urgent response to the crisis rather than through deliberate planning. This abrupt transition exposed several challenges, including limited technological preparedness, unequal access to digital resources, inconsistent student participation, and diverse levels of teaching proficiency—issues that became especially evident in higher education and are commonly experienced across institutions implementing hybrid modalities.

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At the University of Perpetual Help System DALTA–Calamba Campus, the hybrid learning program was formally implemented for all General Education subjects, with Professional Education in every program at the college level conducted purely face-to-face, starting AY 2025–2026. Each program, especially freshmen and sophomores, will take two different subjects: General Education and Professional Education courses. The first is implemented as a regular hybrid learning program (Face-to-face and online), while the second is generally implemented face-to-face only. They are both good settings, and their effectiveness depends on the course environment. It has already been proven that Gen Ed subjects are suitable for both online and face-to-face instruction, while prof ed should be taught face-to-face for countless reasons, as was shown during and after the pandemic.

Despite the intended goals of promoting flexibility, accessibility, and academic continuity, several issues emerged during implementation. These include unstable internet connectivity, varying levels of digital literacy, limited availability of facilities, and the effects of institutional cost-cutting measures. One notable concern involves the scheduling of General Education and Professional Education subjects on the same day. It's making it difficult to balance online and face-to-face classes and contributing to low participation in some online classes. These concerns, raised by both students and faculty members, highlight gaps between the program's objectives and the actual experiences within classrooms.

This study, *"Hybrid Learning in Higher Education: An Analysis of Online and Face-to-Face Instruction,"* aims to examine the gaps by assessing the perceived effectiveness of the hybrid learning program. Research suggests that hybrid learning can enhance digital literacy, promote independent learning, and support continuous education; however, its success depends heavily on institutional readiness, technological infrastructure, and the adaptability of both educators and learners (Reyes & Domingo, 2022; Garcia & Weiss, 2023).

Understanding these dynamics is essential for improving student outcomes, strengthening instructional delivery, and ensuring institutional efficiency. The findings of this study will serve as a basis for refining hybrid learning policies, enhancing support systems, and guiding academic leaders in sustaining high-quality education. Ultimately, this research supports UPHSD–Calamba's mission to cultivate technologically proficient, service-oriented, and globally competitive Perpetualites through adaptive, innovative, and student-centered educational practices.

Theoretical Framework

To deepen this understanding, the study's theoretical foundation is guided by three key frameworks: the Technology Acceptance Model (TAM), the Community of Inquiry (CoI) Framework, and *Constructivist Learning Theory*. *The Technology Acceptance Model* provides insight into how students and faculty adopt and use technological components of hybrid learning, emphasizing the role of *Perceived Usefulness* and *Perceived Ease of Use* in shaping acceptance of online platforms, digital tools, and institutional support systems. Complementing this, the *Community of Inquiry Framework* explains how meaningful learning emerges in hybrid environments through the interaction of *Teaching Presence, Social Presence,* and *Cognitive Presence*, directly reflecting the study's focus on learning activities, communication processes, and instructional feedback. Lastly, the *Constructivist Learning Theory* highlights the importance of active, collaborative, and experiential learning, underscoring how students construct knowledge through online and face-to-face engagements, and how these experiences influence perceived benefits and challenges such as flexibility, engagement, technological skills, motivation, and faculty adaptation.

The first theory that supports the present study is the *Community of Inquiry (CoI) Framework by Garrison, Anderson, and Archer (2000).* This framework states that meaningful learning in online and hybrid environments is achieved through the interaction of three essential elements: *Teaching Presence, Social Presence,* and *Cognitive Presence*. It explains that teaching presence ensures the design and facilitation of instruction, social presence fosters connection and interaction among learners, and cognitive presence promotes critical thinking and deep engagement. When contextualized in the Hybrid Learning

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Program, CoI directly supports the study's effort to describe online learning implementation, face-to-face delivery, learning activities and assessments, and communication and feedback mechanisms. These program components depend on how effectively teachers establish teaching presence, how much learners feel connected through social presence, and how deeply they engage through cognitive presence. Furthermore, CoI elucidates the perceived benefits, such as improved engagement, flexibility, and continuity of learning, as well as the perceived challenges, such as *reduced social interaction, varying motivation,* and *faculty adaptation concerns*. Thus, the CoI framework provides a theoretical lens for understanding how hybrid learning becomes effective or problematic depending on the strength of the three presences.

The second supporting theory is the *Technology Acceptance Model (TAM) developed by Davis (1989).* TAM states that an individual's acceptance and use of technology are determined primarily by two constructs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). It explains that when learners and teachers believe that a technological tool enhances their performance (PU) and is easy to operate (PEOU), they are more likely to adopt and use it effectively. When contextualized to the present study, TAM is highly relevant for describing the institutional support and management system, particularly regarding the *availability of learning resources, technological assistance, faculty preparedness, and administrative policies.* These institutional components influence whether users view the hybrid system as useful and manageable. TAM also clarifies the perceived benefits of hybrid learning, such as *access to learning resources, enhanced technological skills, and flexibility,* which indicate that students perceive the system as beneficial. On the other hand, perceived challenges such as *internet instability, technological limitations,* and *motivation issues* stem from low levels of perceived ease of use and usefulness. Hence, TAM aligns strongly with how students and teachers experience hybrid learning and the factors that affect their willingness to engage with technological tools.

The third theory supporting this research is the *Constructivist Learning Theory (1899),* primarily attributed to Vygotsky, Piaget, and Bruner. This theory states that learners actively construct knowledge through meaningful experiences, interactions, and engagement with their environment. It explains that learning is most effective when students engage in activities that are authentic, collaborative, and reflective, allowing them to develop understanding rather than passively receive information. When contextualized within the hybrid learning environment, constructivism supports the study's focus on describing learning activities, assessment methods, communication processes, and teacher–student interactions. Hybrid learning provides multiple environments—online and face-to-face—where students can construct knowledge through discussions, digital tools, hands-on tasks, and feedback systems. This theory also reinforces the identified perceived benefits, particularly *improved student engagement, continuity of education,* and *development of technological skills*, as hybrid environments promote active learning. At the same time, constructivism helps explain perceived challenges, such as reduced social interaction, varying motivation, and faculty adaptation, that may arise when learning environments do not adequately support student-centered, interactive, and collaborative engagement. Thus, constructivist theory provides a strong foundation for understanding how hybrid learning can foster or hinder meaningful learning, depending on the quality of instructional design and support systems.

In summary, this study adopts a multi-theoretical approach that situates hybrid learning within the Philippine higher education policy on flexible learning while grounding it on global theories of technology adoption, constructivist pedagogy, and social equity. The framework illustrates that the effectiveness of hybrid learning results from the interaction of institutional, technological, pedagogical, and human factors, mediated by engagement and moderated by access. This theoretical grounding serves as the foundation for assessing the benefits and challenges of hybrid learning implementation in higher education institutions, particularly at the University of Perpetual Help System DALTA–Calamba Campus.

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Conceptual Framework

The conceptual framework illustrates the interaction among key variables influencing students' perceptions of the Hybrid Learning Program implemented in General Education courses at UPHSD–Calamba Campus.

Independent Variable: Institutional Support and Management

The Independent Variable of the study is the *Hybrid Learning Program integrated with Institutional Support and Management,* which collectively represent the institution's adaptive educational framework in delivering instruction in the new normal.

The Hybrid Learning Program consists of two instructional modalities: *Online Learning and Face-to-Face Learning*. Online learning includes virtual instruction, the use of digital resources, interactive engagement, and technology-assisted assessments. On the other hand, face-to-face learning emphasizes classroom-based interaction, traditional teaching approaches, and direct interpersonal communication between teachers and students.

Alongside these modalities, *Institutional Support and Management* play a crucial role in ensuring the effective implementation of hybrid learning. This includes administrative support, policy implementation, and the availability and functionality of learning management systems that facilitate instruction. It also covers technological infrastructure, digital platforms, and faculty development and training that prepare educators for hybrid teaching.

Furthermore, resource allocation and financial management sustain the program, while quality assurance mechanisms, accreditation processes, and sound governance and leadership practices contribute to its overall effectiveness.

Collectively, these elements form a unified independent variable that reflects both the instructional delivery and the institutional capacity to support hybrid learning. This integrated approach recognizes that the success of hybrid learning depends not only on teaching modalities but also on the strength of institutional systems and support mechanisms for both learners and educators.

Dependent Variables: Level of Satisfaction, Perceived Benefits, and Challenges

The dependent variables (DV) of the study include students' level of satisfaction, as well as their perceived benefits and difficulties in the hybrid learning experience. The level of satisfaction refers to students' overall contentment with hybrid learning, including their evaluation of instructional quality, the effectiveness of teaching strategies, the accessibility of learning resources, and the balance between online and face-to-face modalities. It also encompasses students' satisfaction with communication and support from instructors, the usability of learning platforms, and the extent to which hybrid learning meets their academic needs and expectations.

The perceived benefits include the flexibility students gain in learning pace and scheduling, as well as the accessibility of both online and offline learning materials. Hybrid learning also enhances students' digital literacy and technological skills while promoting greater engagement through multimodal instruction. Additionally, it ensures continuity of learning during disruptions or emergencies. On the other hand, the perceived difficulties include unstable or limited internet connectivity, inadequate technological devices or outdated software, and reduced social and peer interaction. Students may also experience inconsistent motivation and participation, while faculty members face challenges in balancing the demands of hybrid teaching, which further affects the overall learning environment.

Figure 1 presents the structural components of the conceptual framework, showing the Hybrid Learning Program (Online and Face-to-Face modes) as the independent variable influencing student outcomes. Institutional Support and Management moderate the program's implementation by shaping administrative efficiency, faculty development, technological support, decision-making processes, and overall quality assurance. The dependent variables—perceived benefits and challenges—represent how students, faculty, and staff experience hybrid learning within the UPHSD–Calamba context. The framework

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captures the diverse and interconnected factors that shape the implementation and effectiveness of hybrid learning in higher education.

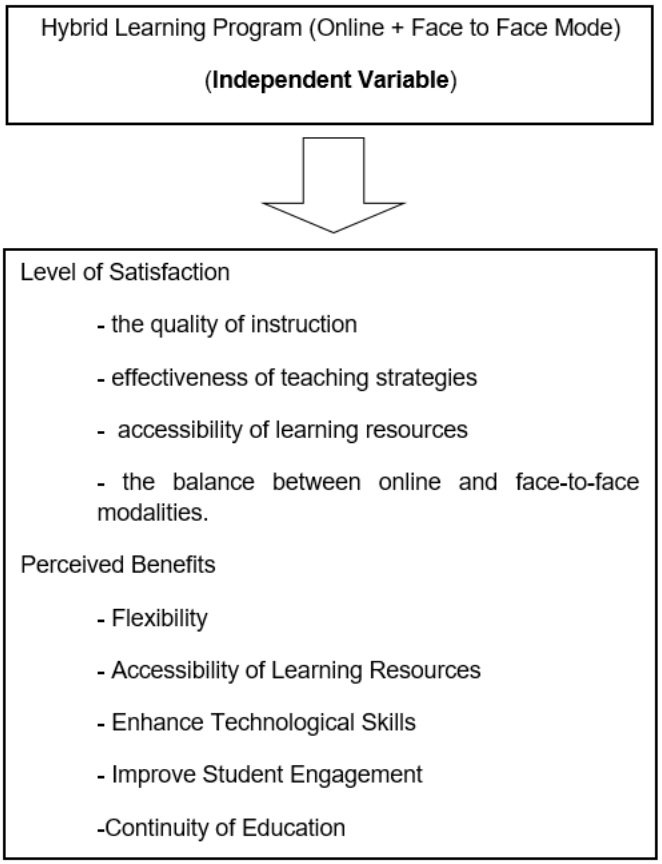


Figure 1. *Components of the Conceptual Framework*

Statement of the Problem

The rapid implementation of the Hybrid Learning Program, which combines online and face-to-face instructional modalities, has significantly transformed the delivery of General Education courses at the University of Perpetual Help System DALTA–Calamba Campus. Under this model, General Education subjects are delivered through a structured schedule in which face-to-face classes are held on designated weekdays, while online classes are held on alternate days, with time allocations varying by course units. This approach was introduced to ensure continuity of education and adaptability to changing learning environments; however, varying experiences among students and faculty suggest that its effectiveness depends on several institutional, pedagogical, and technological factors.

Despite its potential advantages, hybrid learning also presents notable challenges related to infrastructure, instructional delivery, student engagement, and faculty readiness. Differences in access to learning resources, levels of technological support, instructional competence, and clarity of administrative policies may influence how students and faculty experience the hybrid learning setup. Understanding both the benefits and difficulties of this learning modality is therefore essential for improving academic experiences, enhancing teaching effectiveness, and strengthening institutional support systems.

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Hence, there is a need to systematically assess how the Hybrid Learning Program influences students' academic experiences, faculty performance, and institutional operations, particularly regarding scheduling, the availability and accessibility of resources, and instructional delivery. This study aims to assess the benefits and difficulties of the Hybrid Learning Program (online and face-to-face modalities) implemented in General Education courses at the University of Perpetual Help System DALTA–Calamba Campus. Specifically, it seeks to examine the level of satisfaction of respondents regarding institutional support, identify the perceived benefits and challenges of hybrid learning, and determine the relationship among these variables as a basis for proposing an evidence-based improvement plan.

Specifically, this study seeks to answer the following questions:

1. What is the level of satisfaction as perceived by the respondents with regard to the institutional support provided for the Hybrid Learning Program in terms of:
    1.1 technological infrastructure and technical support;
    1.2 learning resources and academic support;
    1.3 faculty and student preparedness;
    1.4 administrative support and communication; and
    1.5 overall institutional support?
2. What is the extent of the degree of challenges associated with the Hybrid Learning Program in terms of:
    2.1 internet stability and connectivity issues;
    2.2 technological limitations and access to devices;
    2.3 reduced social interaction and sense of community;
    2.4 student motivation, participation, and self-discipline;
    2.5 faculty adaptation concerns, including workload and instructional adjustments.
3. What is the extent of the perceived benefits of the Hybrid Learning Program in terms of:
    3.1 flexibility of learning modalities;
    3.2 accessibility and availability of learning resources;
    3.3 enhancement of students' technological and digital skills;
    3.4 level of student engagement and interaction;
4. Is there a significant relationship among the level of satisfaction, extent of perceived benefits, and degree of challenges of the Hybrid Learning Program as perceived by the respondents?
5. Based on the findings of the study, what appropriate output or intervention program may be proposed to enhance the effectiveness of the Hybrid Learning Program in General Education courses at UPHSD–Calamba Campus?

LITERATURE REVIEW

Online and Face-to-Face Delivery in Hybrid Learning: Implementation Quality, Alignment, and Instructional Coherence

Hybrid learning is broadly defined as an instructional approach that deliberately integrates online and face-to-face learning experiences to capitalize on the pedagogical strengths of each modality. Unlike emergency remote teaching, which was implemented as a temporary, reactive response to crises, hybrid learning is intentionally designed and systematically implemented. Its effectiveness depends on careful planning, purposeful instructional design, and sustained institutional support to ensure academic rigor, learner engagement, and meaningful learning experiences. Scholars emphasize that successful hybrid learning is not determined merely by the presence of digital technology, but by the quality of implementation, the degree of alignment among instructional components, and the level of instructional coherence achieved across learning modalities (Kniffin & Greenleaf, 2020).

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High-quality hybrid implementation is characterized by clear learning pathways, consistent pacing, and seamless transitions between online and face-to-face components. Implementation quality refers to how effectively the hybrid learning model is executed in practice, including faculty preparedness, platform readiness, availability of learning resources, and consistency in instructional delivery. When implementation quality is high, students experience well-organized courses with clear expectations and reliable support systems. Gudoniene et al. (2025) explain that instructional coherence emerges when students clearly understand how online activities prepare them for face-to-face sessions and how in-person engagements deepen, apply, or extend what was learned online. Such coherence helps students perceive learning as a unified process rather than fragmented tasks across different platforms.

Alignment is a fundamental dimension of effective hybrid learning, referring to the deliberate consistency among learning objectives, instructional activities, delivery modes, and assessment practices. This principle is grounded in the concept of constructive alignment, where "teaching methods and assessment tasks are aligned with the learning activities assumed in the intended outcomes" (Biggs, 1996). In well-designed hybrid courses, both online and face-to-face components are intentionally structured to achieve shared learning outcomes, ensuring that each modality contributes in a complementary rather than redundant manner (Garrison & Vaughan, 2008). Such coherence enables learners to engage meaningfully across different learning environments while maintaining a clear sense of academic direction.

Moreover, providing redundancy for essential content—such as recorded lectures, downloadable materials, and review resources—supports diverse learning needs and enhances accessibility, particularly in contexts affected by technological or attendance constraints (Koller & Ng, 2012). However, when alignment is poorly implemented, hybrid courses may result in fragmented instruction, unnecessary duplication of content, gaps in knowledge acquisition, and increased cognitive load, ultimately diminishing student motivation and engagement (Picciano, 2017).

Institutional policies and course-level design further play a critical role in ensuring the quality of implementation and instructional coherence. Consistent course policies, standardized use of learning technologies, and clearly structured weekly learning sequences help reduce ambiguity and allow students to focus more effectively on learning tasks (Dziuban et al., 2005; EDUCAUSE, 2020). Additionally, the integration of inclusive design principles, such as those advocated by the Universal Design for Learning framework, promotes accessibility through flexible learning pathways, varied instructional materials, and multiple means of participation (CAST, 2018).

Consequently, hybrid learning requires a systems-oriented approach in which pedagogy, technology, and institutional support are cohesively aligned to create an integrated, equitable, and effective learning environment (Bates, 2019).

Online Learning Implementation

Platform Readiness and Access

Hybrid learning is broadly defined as an instructional approach that deliberately integrates online and face-to-face learning experiences to capitalize on the pedagogical strengths of each modality. Unlike emergency remote teaching, which emerged as a temporary, reactive response to crises, hybrid learning is intentionally designed and systematically implemented. Its effectiveness depends not merely on the presence of digital technology, but on the quality of implementation, instructional alignment, and coherence across learning modalities. Kniffin and Greenleaf (2020) emphasize that meaningful hybrid learning emerges when online and in-person components are purposefully connected to ensure continuity, learner engagement, and academic rigor.

High-quality hybrid learning implementation is characterized by clear learning pathways, consistent pacing, and seamless transitions between online and face-to-face activities. Implementation quality refers to the extent to which institutional policies, faculty preparedness, technological infrastructure, and instructional design work together to support learning. Gudoniene et al. (2025) explain that instructional

coherence is achieved when students clearly understand how online activities prepare them for face-to-face sessions and how in-person engagements deepen, apply, or extend online learning. When such coherence is absent, students often experience fragmented learning, increased cognitive load, and reduced motivation.

Alignment further strengthens the effectiveness of hybrid learning by ensuring consistency across learning objectives, instructional strategies, delivery modes, and assessment practices. This principle is rooted in the concept of constructive alignment, where John Biggs (1996) explains that "the key to effective teaching is to align teaching methods and assessment tasks with the intended learning outcomes" (p. 347). In well-aligned hybrid courses, each modality serves a distinct but complementary function, avoiding unnecessary duplication while reinforcing key concepts. Similarly, Randy Garrison and Norman Vaughan (2008) emphasize that "the integration of online and face-to-face components must be purposeful and systematic" (p. 5) to ensure meaningful learning experiences.

Strategic redundancy—such as recorded lectures, downloadable summaries, and review materials—supports diverse learning needs and mitigates disruptions caused by absences or connectivity issues. According to Tony Bates (2019), "students benefit from multiple representations of content and flexible access to learning materials" (p. 298), particularly in digitally mediated environments. Conversely, poorly aligned courses often lead to confusion, uneven workload distribution, and diminished student engagement, as misalignment increases cognitive load and reduces clarity in learning expectations (Biggs & Tang, 2011).

Within this framework, *online learning implementation*, particularly *platform readiness and access*, plays a central role in sustaining implementation quality, alignment, and instructional coherence. Learning Management Systems (LMSs) such as Moodle, Canvas, and Blackboard serve as the backbone of hybrid instruction by organizing course materials, facilitating communication, administering assessments, and tracking learner progress. Bokolo et al. (2022) emphasize that using a standardized LMS across an institution enhances consistency, reduces student confusion, and enables institutional monitoring of learning outcomes. When platforms are well-organized and consistently used, students are better able to navigate learning tasks and focus on academic content rather than technical concerns.

Beyond the LMS, integrated digital tools such as video conferencing platforms (e.g., Zoom or Microsoft Teams), cloud-based storage, and collaborative applications further enrich hybrid learning environments. These tools enable synchronous lectures, breakout discussions, collaborative activities, and real-time feedback, thereby strengthening interaction and immediacy between instructors and learners. However, the effectiveness of these platforms is closely tied to their accessibility. Muya et al. (2025) highlight the importance of mobile-friendly interfaces, captioned instructional media, and low-bandwidth alternatives to ensure inclusive participation among students with limited internet connectivity or outdated digital devices.

In developing-country contexts, including many regions in the Philippines, unequal access to reliable internet connectivity and appropriate technological resources remains a persistent challenge. As noted by Mark Warschauer (2004), "the digital divide is not merely a matter of access to technology, but also of the social, economic, and institutional resources required to use technology effectively" (p. 7). When institutions fail to address these disparities, hybrid learning risks reinforcing existing educational inequalities. Similarly, UNESCO (2020) emphasizes that "the shift to online and blended learning has exposed and exacerbated existing inequalities in access to technology and connectivity," particularly in developing contexts.

As such, platform readiness must be complemented by institutional initiatives such as device-loan programs, subsidized internet access, faculty and student training, and responsive technical support services. Accessibility, therefore, extends beyond technical functionality and reflects an institution's commitment to equity, inclusion, and educational justice. This aligns with Tony Bates's (2019) assertion that "technology is only as effective as the support structures that enable both teachers and learners to use it appropriately" (p. 512).

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Taken together, effective hybrid learning requires a systems-oriented approach in which pedagogical design, technological infrastructure, and institutional support function in harmony. Anthony G. Picciano (2017) supports this view, arguing that "an integrated model of online education must consider multiple interacting components, including pedagogy, technology, and organizational factors" (p. 175). Platform readiness and equitable access are therefore not peripheral concerns but essential components of implementation quality, shaping students' satisfaction, perceived benefits, and challenges in hybrid learning environments. This alignment underscores the critical role of institutional support in ensuring that hybrid learning is both effective and inclusive.

Synchronous and Asynchronous Balance

Another critical dimension of online learning implementation in hybrid education is the balance between synchronous and asynchronous components. Synchronous sessions, whether conducted online or face-to-face, provide opportunities for real-time interaction, immediate feedback, and the development of social presence. These sessions foster direct engagement between students and instructors, support collaborative learning, and help sustain motivation. Hatcher et al. (2022) argue that synchronous activities are most effective when used strategically for interaction-intensive tasks such as question-and-answer sessions, collaborative problem-solving, peer feedback, and guided discussions, rather than for passive content delivery alone.

Asynchronous learning, on the other hand, offers flexibility and learner autonomy by allowing students to engage with instructional content at their own pace and within their own schedules. Pre-recorded lectures, assigned readings, discussion forums, reflective journals, and self-paced learning modules accommodate diverse learning needs and external commitments. Mulenga and Shilongo (2024) note that well-designed asynchronous activities promote deeper learning through retrieval practice, reflection, and iterative feedback, thereby supporting self-regulated learning and long-term knowledge retention.

Despite its advantages, overreliance on asynchronous delivery may undermine student motivation and weaken social connection. When opportunities for real-time interaction are limited, students may experience feelings of isolation, disengagement, or uncertainty regarding expectations and learning progress. As emphasized by D. Randy Garrison, "sustained communication and collaboration are essential for maintaining social and cognitive presence in online learning environments" (Garrison et al., 2000, p. 96). Similarly, excessive synchronous requirements can disadvantage students who face connectivity issues, scheduling conflicts, or limited access to digital resources. UNESCO (2020) highlights that "learners' ability to participate in synchronous activities is often constrained by unequal access to reliable internet and appropriate devices." Therefore, achieving an appropriate balance between synchronous and asynchronous modalities is essential to ensure inclusivity and equity in hybrid learning environments.

Effective hybrid learning designs intentionally allocate synchronous sessions to interaction-rich, feedback-oriented activities, while asynchronous components are used for content acquisition, reflection, and formative assessment. According to Randy Garrison and Norman Vaughan (2008), "the thoughtful integration of face-to-face and online learning experiences creates a more flexible and effective learning environment" (p.5). Clear institutional guidelines regarding participation requirements, timelines, and workload distribution further support this balance. In addition, Tony Bates (2019) notes that "students need clear structure, expectations, and manageable workloads to succeed in online and blended learning environments" (p. 304). When students clearly understand when attendance is required and when flexibility is permitted, cognitive load is reduced, and learning experiences become more manageable and meaningful. Consequently, a well-balanced synchronous–asynchronous structure enhances student satisfaction, engagement, and continuity of learning, making it a key indicator of implementation quality and instructional coherence in hybrid learning programs.

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Online Presence and Engagement

Online presence and engagement refer to the extent to which instructors and students are visibly active, cognitively involved, and socially connected within the online components of a hybrid learning environment. Strong online presence helps bridge the physical and psychological distance inherent in digital learning by fostering connection, continuity, and instructional support. Research consistently shows that students' perceptions of online presence—particularly instructor presence—are closely associated with motivation, engagement, and overall satisfaction in hybrid learning contexts.

Instructor presence is a key determinant of student engagement in online components of hybrid learning. It is manifested through timely and clear communication, active facilitation of discussions, and visible involvement in course activities. Gudoniene et al. (2025) emphasize that instructor presence is strengthened through weekly roadmap posts, video announcements, regular feedback, and participation in discussion forums, all of which help maintain learning momentum and clarify academic expectations. When instructors are consistently visible, students develop greater confidence in the course structure and a clearer understanding of how online activities contribute to intended learning outcomes.

Learner engagement is further enhanced through well-structured instructional strategies that promote interaction and accountability. Structured discussion prompts, collaborative group tasks, and clearly defined participation rubrics encourage meaningful contributions and sustained involvement. Niyomves et al. (2024) found that peer interaction and feedback mechanisms not only foster accountability but also deepen cognitive engagement by encouraging reflection, dialogue, and the construction of shared knowledge. These strategies support the behavioral, cognitive, and emotional dimensions of engagement, which are essential for successful learning in hybrid environments.

Learning Management Systems (LMS) play a significant role in supporting online presence and engagement through embedded learning analytics, enabling instructors to monitor participation patterns, track task completion, and identify students at risk of disengagement. As noted by George Siemens and Dragan Gašević (2012), "learning analytics focuses on the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning" (p. 1). Through these data-driven insights, instructors can implement early interventions—such as personalized reminders, academic consultations, or targeted feedback—which help prevent attrition and improve learning outcomes. However, the effective use of analytics requires faculty competence in digital pedagogy and instructional technology. In this regard, Rebecca Ferguson (2012) emphasizes that "the potential of learning analytics can only be realized if educators have the skills to interpret and act upon the data generated" (p. 305). Without adequate training, the availability of analytics tools alone may not translate into meaningful improvements in student engagement, underscoring the importance of institutional support in developing faculty capability to fully leverage LMS analytics in hybrid learning environments.

Sustaining strong online presence and engagement depends not only on individual instructor practices but also on the availability of institutional support systems. As noted by D. Randy Garrison, "teaching presence is a significant determinant of student satisfaction, perceived learning, and sense of community" (Garrison et al., 2000, p. 89), highlighting the need for structured support beyond individual effort. Without adequate training and professional development, instructors may struggle to facilitate meaningful discussions, design engaging online activities, or effectively manage the demands of hybrid teaching. In this regard, Tony Bates (2019) emphasizes that "professional development and ongoing support are critical for instructors transitioning to online and blended learning environments" (p. 426).

Continuous faculty development programs focused on online facilitation, assessment design, and learner engagement strategies are therefore essential to ensure the quality, coherence, and effectiveness of hybrid learning programs. Similarly, OECD (2020) asserts that "teachers require sustained training and institutional support to effectively integrate digital technologies into their pedagogical practices." Consequently, online presence and engagement serve as key indicators of implementation quality, instructional coherence, and the overall success of hybrid learning initiatives.

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Face-to-Face Learning Delivery

Purposeful In-Person Activities

Despite advances in online education, face-to-face learning remains a vital component of hybrid instruction. Purposeful in-person activities are deliberately designed to complement online learning, providing opportunities for experiential learning, immediate feedback, and social interaction that are difficult to replicate digitally. High-quality hybrid implementation ensures that face-to-face time is reserved for high-impact, interaction-rich activities such as laboratories, simulations, presentations, collaborative problem-solving, workshops, and role-playing (Kniffin & Greenleaf, 2020).

UNESCO (2023) emphasizes that practice-based learning and guided application during in-person sessions enhance mastery of complex concepts and skills. Faculty coaching and real-time feedback in these sessions help clarify misunderstandings, reinforce learning, and support the development of higher-order cognitive skills. Students consistently report valuing face-to-face interactions for their immediacy, relational depth, and sense of academic community, all of which contribute to engagement, motivation, and overall satisfaction with the hybrid learning experience.

Purposeful in-person activities foster social presence and collaboration among learners by creating opportunities for meaningful interaction. Structured group tasks, peer discussions, and mentoring activities promote teamwork, accountability, and the construction of shared knowledge. As emphasized by D. Randy Garrison, Terry Anderson, and Walter Archer (2000), "social presence is the ability of participants to identify with the community, communicate purposefully, and develop interpersonal relationships" (p. 94), which is essential for collaborative learning. These experiences also strengthen affective learning outcomes such as confidence, communication skills, and values formation—dimensions that are particularly relevant in values-oriented institutions like the University of Perpetual Help System DALTA.

From an instructional design perspective, in-person sessions are most effective when embedded within a coherent learning cycle that integrates online and face-to-face components. Pre-class online activities, including readings, video lectures, and formative assessments, prepare students for active engagement during in-person sessions, while post-class reflections help consolidate learning. According to Randy Garrison and Norman Vaughan (2008), "effective blended learning requires the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (p. 5). Similarly, the Commission on Higher Education (2023) advises that in-person activities should complement rather than duplicate online content, as students are more likely to engage when they perceive clear instructional value.

Institutional support is critical for optimizing the delivery of face-to-face learning in hybrid environments. Factors such as flexible classroom layouts, functional audiovisual equipment, manageable class sizes, and well-planned schedules contribute to more interactive and student-centered learning experiences. As noted by Tony Bates (2019), "good teaching with technology requires not only appropriate tools but also strong institutional support and effective learning environments" (p. 52). Faculty training in active learning strategies further ensures that in-person sessions are aligned with course outcomes and promote meaningful engagement. When these conditions are met, purposeful in-person activities become a key indicator of the quality of hybrid learning implementation, directly influencing student engagement, perceived benefits, and overall satisfaction, while addressing challenges such as limited social interaction.

Flow and Logistics

Effective hybrid learning requires careful attention to flow and logistics, which encompass the organization, pacing, and operational management of in-person sessions within a broader hybrid framework. The integration of pre-class online preparation, in-class activities, and post-class reflection creates a coherent learning cycle that enhances continuity and reinforces learning across modalities. As emphasized by Randy Garrison and Norman Vaughan (2008), "effective blended learning requires the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (p.

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5). Well-planned flow allows students to transition smoothly from online pre-class tasks to in-person engagement, while follow-up activities consolidate learning outcomes.

Pacing is a key component of flow, ensuring that learning activities are manageable and pedagogically effective. In-person sessions should balance content delivery, active learning, practice, and assessment without overwhelming students. Pre-class preparation—such as video lectures, readings, or formative quizzes—enables instructors to dedicate face-to-face time to interaction-intensive activities. In this regard, Eric Mazur (1997) highlights that "students learn more effectively when they are actively engaged in the learning process rather than passively listening to lectures" (p. 10). Post-class reflection, feedback, and follow-up exercises further reinforce learning and ensure alignment between online and in-person components.

Physical facilities play a critical role in supporting flow and logistics within hybrid environments. Flexible classroom layouts accommodate group work, hands-on exercises, and interactive discussions, while reliable audiovisual equipment and stable internet connectivity enable smooth transitions between different instructional activities. According to Tony Bates (2019), "a well-designed learning environment, supported by appropriate infrastructure, is essential for effective teaching and learning" (p. 52). Scheduling logistics are equally important; poorly coordinated timetables can lead to student fatigue, conflicts, or disengagement. Clear, consistent schedules communicated in advance help reduce cognitive load and support effective time management.

Administrative and institutional support is essential for ensuring seamless flow and logistics. Timely room assignments, accessible technical assistance, and contingency planning allow instructors to focus on pedagogy rather than operational concerns. As noted by OECD (2020), "effective implementation of digital and hybrid learning requires strong institutional coordination and support systems." When flow and logistics are well managed, face-to-face sessions become purposeful, productive, and engaging, ultimately enhancing student satisfaction, perceived learning benefits, and overall effectiveness of hybrid learning.

Inclusivity and Participation

Inclusivity and participation are fundamental components of effective face-to-face learning delivery in hybrid education. Inclusivity ensures that all students, regardless of ability, health conditions, socioeconomic status, or personal circumstances, can access and meaningfully engage in in-person sessions, while participation emphasizes active and equitable involvement in learning activities. As emphasized by CAST (2018), "there is no one-size-fits-all approach to learning; variability among learners must be anticipated and addressed through flexible learning environments." Together, these elements strengthen engagement, collaboration, and overall learning outcomes.

Purposeful strategies for fostering inclusivity include clear participation norms, structured group roles, and alternative demonstration formats. These approaches allow students with diverse strengths and learning preferences to contribute meaningfully to collaborative tasks. In line with this, David W. Johnson and Roger T. Johnson (2009) assert that "cooperative learning, when properly structured, ensures that all group members are actively involved and accountable for their contributions" (p. 365). Alternative demonstration formats—such as oral presentations, written reports, or digital submissions—further ensure that students are not disadvantaged by physical, cognitive, or situational limitations, supporting equitable participation in learning activities.

Institutions play a critical role in promoting inclusivity by embedding accessibility standards into classroom design, instructional practices, and institutional policies. Flexible classroom layouts, assistive technologies, clear communication, and accommodations for students with disabilities or health concerns help remove barriers to engagement. According to UNESCO (2020), "inclusive education systems must ensure that all learners can access and participate meaningfully in learning, regardless of their

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circumstances." When inclusivity is neglected, students may feel marginalized, leading to reduced participation, disengagement, and unequal learning opportunities.

Inclusive face-to-face delivery aligns with broader educational goals of equity, social justice, and community building in higher education. As noted by bell hooks (1994), "the classroom remains the most radical space of possibility in the academy" (p. 12), particularly when it fosters inclusion and shared participation. Such an environment enhances student engagement and satisfaction while reinforcing the effectiveness of hybrid learning programs by ensuring that in-person sessions are meaningful, accessible, and socially supportive. In this context, the quality of inclusivity and participation directly influences perceived benefits, engagement levels, and satisfaction, while mitigating challenges related to reduced collaboration and marginalization.

Learning Activities and Assessment

Modality-Optimized Learning Activities

Learning activities in hybrid courses must be deliberately designed to leverage the unique strengths of both online and face-to-face modalities, ensuring that each component contributes meaningfully to the learning experience. Online environments excel in providing flexible, self-paced access to content, formative assessments, collaborative drafting, reflective discussions, and knowledge acquisition. These activities allow students to engage with material according to their own schedules, facilitating *self-regulated learning, critical reflection, and iterative practice*. Tools such as discussion forums, collaborative documents, interactive quizzes, and multimedia resources enhance cognitive engagement, encourage knowledge sharing, and support learners with diverse needs and learning styles (Mulenga & Shilongo, 2024; Bokolo et al., 2022).

Face-to-face sessions, on the other hand, are optimized for performance-based, application-focused, and interactive tasks. Simulations, debates, laboratory exercises, workshops, presentations, and collaborative problem-solving activities allow students to apply knowledge, receive immediate feedback, and develop practical skills. In-person interactions also foster social presence, peer collaboration, and spontaneous reasoning, which are difficult to replicate fully in online settings (Kniffin & Greenleaf, 2020; UNESCO, 2023). These activities complement online learning by translating theoretical understanding into tangible outcomes, reinforcing mastery, and enhancing motivation through real-time engagement.

Modality Optimization

Modality optimization ensures that online and in-person activities do not function as isolated silos but rather form a cohesive, interconnected learning cycle. Online preparatory modules can introduce key concepts and provide guided practice, which students then apply, analyze, or expand upon during in-person sessions. Conversely, outcomes from face-to-face discussions or problem-solving tasks can be extended through asynchronous reflection or collaborative online work, creating a continuous loop of learning, application, and reflection. As emphasized by Randy Garrison and Norman Vaughan (2008), "the real strength of blended learning lies in its ability to integrate the strengths of both face-to-face and online learning" (p. 5), enabling both autonomy and meaningful interaction among learners.

When aligned with clearly defined learning outcomes, modality-optimized activities also support assessment, feedback, and performance measurement. Online formative assessments provide instructors with timely data on student understanding and progress, while face-to-face performance tasks enable the demonstration of applied knowledge and higher-order thinking skills. In this regard, John Biggs and Catherine Tang (2011) note that "assessment tasks must be aligned with the intended learning outcomes and the teaching activities" (p. 198), ensuring coherence across all components of the learning process. This complementary approach integrates theory and practice while enhancing student satisfaction, perceived benefits, and academic performance.

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Ultimately, modality-optimized learning activities are central to hybrid instructional coherence. They promote continuity across learning environments, encourage active engagement and reflection, and address challenges such as reduced interaction or disengagement. According to Tony Bates (2019), "effective teaching in a digital age requires the careful selection and integration of different delivery modes to meet diverse learner needs" (p. 57). By intentionally designing activities that capitalize on the strengths of both online and in-person modalities, instructors can create a holistic, inclusive, and effective hybrid learning experience aligned with institutional goals, learner needs, and desired program outcomes.

Authentic Assessment and Academic Integrity

Assessment practices are central to student learning, engagement, and the overall effectiveness of hybrid education. In hybrid environments, traditional high-stakes examinations may not fully capture students' understanding or skills and can inadvertently encourage academic dishonesty. To address these limitations, authentic assessment emphasizes real-world tasks and applied performance. As noted by Grant Wiggins (1998), "authentic assessments are designed to simulate real-world challenges and standards of performance that experts or professionals typically face" (p. 21), enabling students to connect learning meaningfully to practical contexts.

Examples of authentic assessment include multi-stage projects, portfolios, case analyses, presentations, simulations, and oral defenses. These approaches evaluate not only content mastery but also higher-order competencies such as critical thinking, creativity, collaboration, and communication. In this regard, UNESCO (2023) emphasizes that "assessment should move beyond rote memorization and focus on learners' ability to apply knowledge in real-life situations." By shifting toward performance-based tasks, authentic assessment fosters deeper learning, encourages reflection, and promotes the development of transferable skills relevant to professional and social contexts.

Research indicates that authentic assessment can increase student motivation, engagement, and satisfaction, particularly when tasks are perceived as relevant and meaningful. Transparent rubrics and clearly defined evaluation criteria are essential to ensure fairness and consistency across modalities. According to John Biggs and Catherine Tang (2011), "assessment tasks must be aligned with the intended learning outcomes and the teaching activities" (p. 198), reinforcing coherence in hybrid course design. Aligning assessments with learning outcomes ensures that both online and face-to-face components contribute to measurable student achievement and learning progress.

However, designing and implementing authentic assessment in hybrid courses requires faculty expertise and strong institutional support. Instructors must balance rigor, flexibility, and accessibility while ensuring equitable opportunities for students with diverse abilities and learning contexts. As emphasized by Tony Bates (2019), "effective teaching with technology requires not only appropriate tools but also training and institutional support for instructors" (p. 426). Without proper guidance, faculty may struggle to design tasks that are both meaningful and manageable across modalities, highlighting the critical role of institutions in providing professional development, assessment frameworks, and technological resources.

Integrating authentic assessment effectively strengthens the hybrid learning experience by promoting active engagement and ethical responsibility among learners. As argued by Linda Darling-Hammond (2014), "performance-based assessments can provide richer information about student learning and better support deeper understanding" (p. 18). Consequently, authentic assessment directly influences key variables such as student satisfaction, perceived benefits, and academic engagement, while addressing challenges related to fairness, integrity, and overall assessment effectiveness in hybrid learning environments.

Feedback Effectiveness

Feedback is a critical component of the learning process in hybrid education, transforming assessment from a mere evaluation tool into an opportunity for growth and continuous improvement. In

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both online and face-to-face modalities, timely, clear, and actionable feedback supports student learning by identifying gaps and guiding improvement. As emphasized by John Hattie and Helen Timperley (2007), "feedback is among the most powerful influences on achievement" (p. 81), particularly when it is aligned with learning goals and clearly communicated to learners.

In hybrid courses, feedback can take multiple forms, including written comments, annotated submissions, audio or video recordings, and real-time verbal interactions. These approaches enhance clarity, personalization, and engagement. Online platforms also provide automated feedback tools, such as quiz corrections and instant responses, which allow students to receive immediate guidance. However, such tools should complement rather than replace instructor-led feedback. In this regard, David Nicol and Debra Macfarlane-Dick (2006) note that "good feedback practice facilitates the development of self-regulated learning" (p. 199), highlighting the importance of meaningful and dialogic feedback processes.

Research further indicates that feedback effectiveness depends on its timeliness and specificity. Prompt feedback enables students to apply corrections and strategies to subsequent tasks, maintaining continuity in learning. According to Grant Wiggins (2012), "feedback should be timely, specific, understandable, and actionable for it to be effective" (p. 10). Additionally, incorporating opportunities for learner reflection and self-assessment allows students to internalize feedback and develop independent learning skills. Action plans derived from feedback further support sustained academic progress and improvement.

Hybrid learning environments introduce both opportunities and challenges for feedback delivery. Online tools allow instructors to reach students across different contexts, while face-to-face sessions provide immediate clarification and guided support. However, maintaining consistency and managing workload remain critical concerns. As noted by Tony Bates (2019), "effective teaching with technology requires careful planning and institutional support to ensure quality and consistency" (p. 426). Institutions can enhance feedback effectiveness by providing faculty with professional development, clear guidelines, and technological resources.

Effective feedback has a direct impact on student engagement, satisfaction, and perceived benefits in hybrid learning. It not only guides improvement but also fosters motivation, accountability, and confidence among learners. As argued by Dylan Wiliam (2011), "feedback should cause thinking and lead to improvement" (p. 123). When integrated with modality-optimized learning activities and authentic assessments, feedback becomes an essential mechanism for sustaining instructional coherence, promoting academic integrity, and maximizing the overall effectiveness of hybrid education.

Communication and Feedback Mechanisms

Multi-Channel Communication

Effective communication is a cornerstone of successful hybrid learning, as it ensures that students understand expectations, deadlines, instructional procedures, and available support resources. Given the dual nature of hybrid courses—combining online and face-to-face components—a multi-channel communication plan is essential to reduce confusion, promote engagement, and maintain continuity across modalities.

A structured, multi-channel approach ensures that messages are delivered consistently, reach all students, and are accessible regardless of individual schedules or technical limitations. Weekly roadmap posts, reminders, and check-ins provide a predictable rhythm of communication, allowing students to plan their time, manage workloads, and anticipate upcoming activities (Gudoniene et al., 2025). This consistent messaging reduces cognitive overload and anxiety, supporting higher levels of engagement and learning satisfaction.

Learning Management Systems (LMS), such as Moodle, Canvas, or Blackboard, serve as the central hub for official announcements, course materials, and assessment information. By establishing a "single source of truth," the LMS promotes transparency, reduces misinformation, and provides a consistent

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reference point for students. Complementary tools, including messaging platforms like Microsoft Teams, WhatsApp, or Slack, enable real-time clarification and peer interaction. As noted by D. Randy Garrison, Terry Anderson, and Walter Archer (2000), "teaching presence… facilitates and directs cognitive and social processes for the realization of meaningful learning outcomes" (p. 89), highlighting the importance of clear and consistent communication channels in sustaining engagement.

Additionally, virtual and face-to-face office hours provide personalized support tailored to students' preferences, schedules, and learning needs. Offering multiple access points for communication ensures more equitable participation, particularly for students facing connectivity issues or other constraints. In this regard, David Nicol and Debra Macfarlane-Dick (2006) emphasize that "dialogue between teacher and student is an essential component of effective feedback" (p. 205), underscoring the value of accessible communication pathways. Multi-channel communication also reinforces instructional coherence by keeping students aligned with course objectives, deadlines, and expectations across both online and in-person modalities.

A robust multi-channel communication system enhances clarity, consistency, and accessibility of information while reducing student confusion and supporting planning and time management. It also strengthens engagement and social presence through multiple interactive channels and ensures equitable access to academic support across diverse student populations. According to Tony Bates (2019), "communication and interaction are at the heart of effective online and blended learning environments" (p. 222), reinforcing the importance of integrated communication strategies in hybrid education.

When combined with structured feedback mechanisms, multi-channel communication creates a cohesive learning ecosystem in which students remain informed, motivated, and connected. As argued by John Hattie and Helen Timperley (2007), "feedback combined with effective communication significantly enhances learning outcomes" (p. 102). Consequently, a well-designed communication system improves student satisfaction, perceived benefits, and academic performance, making it a critical component of successful hybrid learning programs.

Responsiveness and Escalation

In hybrid learning environments, timely responsiveness is critical to building learner confidence, trust, and a sense of academic support. Because students engage with both online and face-to-face components, delays in addressing questions or clarifying instructions can lead to confusion, disengagement, or frustration. As emphasized by D. Randy Garrison, Terry Anderson, and Walter Archer (2000), "teaching presence includes the design, facilitation, and direction of cognitive and social processes to achieve meaningful learning outcomes" (p. 90), underscoring the importance of timely instructor responsiveness. Establishing clear service-level expectations—such as responding to emails, forum posts, or inquiries within 24–48 hours—ensures students feel supported and valued.

Escalation pathways are equally important in maintaining continuity of support when issues cannot be resolved at the instructor level. These may involve teaching assistants, help desks, program coordinators, or designated administrative personnel. Such structures prevent delays in problem resolution and reduce disruption to learning. In this regard, Tony Bates (2019) notes that "effective learning environments require clearly defined support systems that extend beyond the instructor" (p. 226), highlighting the importance of institutional coordination in hybrid learning.

The use of analytics-informed nudges further enhances responsiveness by enabling proactive intervention. Learning Management Systems (LMS) and online platforms track participation, submission patterns, and engagement metrics, allowing instructors to identify students at risk of disengagement. As explained by George Siemens and Dragan Gašević (2012), "learning analytics provides data that can be used to anticipate learner needs and improve learning outcomes" (p. 2). Through personalized reminders, targeted encouragement, or invitations to support sessions, institutions can provide timely, individualized interventions while respecting learner autonomy.

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Structured responsiveness and escalation mechanisms ultimately foster long-term student confidence and satisfaction. As noted by John Hattie and Helen Timperley (2007), "feedback and timely communication are essential for improving student learning and achievement" (p. 102). When learners perceive that support is timely, reliable, and accessible, they are more likely to remain engaged and persist through challenges in hybrid learning environments, including those related to connectivity or workload constraints.

In summary, responsiveness and escalation mechanisms build learner trust, ensure timely resolution of academic and technical concerns, enable data-driven personalized support, promote equity and inclusivity, and reinforce instructional coherence across hybrid modalities. As such, they function as a critical pillar of communication and feedback systems in hybrid learning, directly influencing student engagement, satisfaction, and perceived learning benefits.

Community Presence in Hybrid Learning

Community presence is a fundamental component of hybrid learning that supports the social, emotional, and collaborative dimensions of student engagement. Unlike traditional fully in-person classes, hybrid courses divide learning between online and face-to-face modalities, which can reduce spontaneous social interaction. As emphasized by D. Randy Garrison, Terry Anderson, and Walter Archer (2000), "social presence is the ability of learners to project themselves socially and emotionally in a community of inquiry" (p. 94), highlighting the importance of intentional strategies to build connection and belonging in hybrid environments.

Structured strategies enhance community presence in hybrid learning by promoting interaction and collaboration among students. Small cohorts, learning pods, or breakout groups encourage peer accountability and meaningful discussion. In this regard, Katherine Kniffin and Thomas Greenleaf (2020) note that "structured group interaction fosters deeper engagement and shared responsibility in collaborative learning environments" (p. 312). Guided discussion protocols, such as structured prompts and participation rubrics, further ensure equitable contribution and scaffold collaborative problem-solving.

Mentoring programs and peer support systems also strengthen community bonds in hybrid learning. Pairing students with faculty mentors, senior students, or peer leaders provides academic and emotional guidance while reinforcing positive learning behaviors. As noted by Lev Vygotsky (1978), "learning is inherently a social process that occurs through interaction with more capable others" (p. 86), underscoring the value of mentorship in scaffolding student development and fostering meaningful relationships.

Norms for online interaction, including netiquette guidelines and standardized feedback protocols, are essential to maintain psychological safety and inclusivity. Clear expectations for respectful communication and constructive dialogue help minimize misunderstandings and promote a supportive learning environment. According to Tony Bates (2019), "clear guidelines and expectations are essential for effective communication and collaboration in online learning environments" (p. 223), reinforcing the importance of structured communication norms.

Research indicates that when students feel connected to peers and instructors, they are more likely to persist through academic challenges, engage deeply with course content, collaborate effectively, and demonstrate higher levels of motivation and performance. As highlighted by John Hattie (2009), "student achievement is significantly influenced by the quality of relationships and classroom climate" (p. 118), demonstrating the strong link between community presence and learning outcomes.

Community presence, therefore, is not merely a social convenience but a pedagogical necessity in hybrid learning. By embedding structured interaction, mentorship, and respectful communication into course design, institutions create a cohesive and supportive learning ecosystem. This aligns with Etienne Wenger's (1998) view that "learning is a process of participation in communities of practice" (p. 4), reinforcing the idea that meaningful learning emerges through sustained social engagement and collaboration.

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Quality Assurance and Continuous Improvement

Data and Insights

Quality assurance in hybrid learning depends heavily on systematic data collection, analysis, and informed decision-making. Because hybrid instruction integrates both online and face-to-face modalities, institutions generate a wide range of data that can inform teaching practices and institutional policies. As emphasized by George Siemens and Dragan Gašević (2012), "learning analytics provides the measurement, collection, analysis and reporting of data about learners and their contexts for purposes of understanding and optimizing learning" (p. 1). Effectively leveraging this data helps ensure that learning experiences are effective, equitable, and aligned with intended outcomes.

Engagement metrics form a foundational component of hybrid learning analytics, including login frequency, time spent on course materials, participation in discussion forums, and access to learning resources. These indicators help reveal patterns of student behavior and identify learners who may be disengaged or at risk of falling behind. In this regard, Rebecca Ferguson (2012) notes that "patterns of learner activity can provide early signals of disengagement and academic risk" (p. 305), enabling timely intervention and support.

Performance indicators provide additional insight into learning outcomes and achievement gaps, including quiz scores, rubric-based assessments, project outputs, and progression through learning modules. These data help identify areas where students struggle and where instructional adjustments are needed. According to John Hattie (2009), "the use of evidence to inform teaching decisions has one of the highest impacts on student achievement" (p. 181), highlighting the importance of data-informed instructional refinement.

The integration of engagement and performance data enables evidence-based decision-making at both the course and institutional levels. Instructors can adjust pacing, redesign activities, and provide targeted interventions, while administrators can allocate resources and design faculty development programs based on identified needs. As noted by Tony Bates (2019), "data-driven decision-making allows educators to continuously improve teaching and learning practices" (p. 418), reinforcing the value of analytics in hybrid education systems.

However, ethical considerations are essential when using student data. Institutions must prioritize privacy, transparency, and informed consent to maintain trust and protect learner autonomy. As emphasized by UNESCO (2023), "the use of learning data must respect ethical standards, including privacy, security, and fairness in educational decision-making." Clear policies regarding data access, retention, and usage must be established and communicated to all stakeholders.

Ultimately, leveraging data and insights in hybrid learning supports continuous improvement, accountability, and evidence-based practice. It transforms learning analytics into a tool for proactive engagement, targeted support, and instructional refinement. As argued by Diana Laurillard (2012), "teaching is a design science that must continuously evolve through evidence and feedback" (p. 89), underscoring how data-driven systems enhance the quality, equity, and effectiveness of hybrid learning programs.

Iteration and Refinement

Continuous improvement in hybrid learning relies on systematic, iterative cycles of evaluation and refinement. Because hybrid education integrates both online and face-to-face modalities, it requires ongoing monitoring to ensure coherence, effectiveness, and responsiveness to learner needs. As emphasized by Diana Laurillard (2012), "teaching is an iterative design process in which feedback is used to improve learning outcomes over time" (p. 56). This highlights the necessity of continuous adaptation in hybrid learning environments to maintain instructional quality.

Rapid, in-course adjustments are a key component of iterative improvement. Faculty may respond in real time to issues such as unclear instructions, technological disruptions, or engagement gaps by revising

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materials, clarifying expectations, or modifying activities. In this regard, John Hattie and Helen Timperley (2007) emphasize that "feedback is most powerful when it is used to make immediate instructional adjustments that improve learning" (p. 87). Such responsiveness ensures continuity across modalities and supports sustained student engagement.

Post-course reviews complement rapid adjustments by providing a broader evaluation of instructional effectiveness. These reviews draw on engagement data, assessment outcomes, student feedback, and faculty reflections to inform long-term course and program improvements. As noted by Tony Bates (2019), "evaluation of teaching effectiveness should be continuous and based on multiple sources of evidence" (p. 418), reinforcing the importance of systematic review in improving hybrid learning design.

Faculty development programs are essential for sustaining continuous improvement across iterations of hybrid courses. These programs help instructors strengthen competencies in digital pedagogy, accessibility, engagement strategies, and feedback practices. According to Michael Fullan (2016), "professional learning is most effective when it is ongoing, collaborative, and grounded in practice" (p. 72), emphasizing the importance of continuous capacity-building for educators.

Iterative refinement also fosters a culture of reflective practice and evidence-based decision-making. Faculty are encouraged to evaluate teaching strategies, incorporate student feedback, and implement incremental improvements over time. As highlighted by Donald Schön (1983), "reflective practitioners continually frame and reframe problems through experience and feedback" (p. 68), reinforcing the role of reflection in instructional improvement.

Ultimately, iteration and refinement in hybrid learning not only address immediate instructional challenges but also promote sustainable academic excellence. When combined with data-driven insights and structured faculty development, iterative cycles enhance learning outcomes, engagement, equity, and program effectiveness. This aligns with the view of OECD (2020), which emphasizes that "education systems must continuously adapt and improve through evidence-informed decision-making" (p. 34).

Risk Management and Equity

Connectivity and Device Constraints

Connectivity and device limitations are among the most significant risks in hybrid learning, particularly in developing-country contexts or areas with uneven technological infrastructure. Students may experience intermittent internet access, low bandwidth, or lack of suitable devices, which can hinder participation and engagement. As emphasized by UNESCO (2020), "unequal access to digital technologies has exacerbated existing educational inequalities," highlighting the persistent digital divide in education systems. Such constraints can delay submissions, reduce participation, and negatively affect learning outcomes, equity, and student satisfaction.

Institutions can adopt multiple strategies to mitigate these risks. Providing downloadable course materials, recorded lectures, and offline resources allows students to access learning content even without stable internet connectivity. In this regard, Tony Bates (2019) notes that "flexibility in access to learning materials is essential to support students with diverse technological constraints" (p. 214). Flexible deadlines and asynchronous options further help learners manage disruptions without academic penalty, ensuring fairness in hybrid learning environments.

Device-loan programs are another effective solution for addressing access disparities

By providing laptops, tablets, or Wi-Fi hotspots, institutions can reduce barriers to participation and promote equitable access to learning opportunities. As stated by World Bank (2021), "closing the digital divide requires targeted interventions that ensure access to devices and connectivity for disadvantaged learners," reinforcing the importance of institutional action in promoting inclusion.

Platform-agnostic tools and offline-compatible content further enhance system resilience. Applications that function across multiple devices and operating systems, as well as learning materials that

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can be accessed offline, reduce barriers to participation. According to Mark Warschauer (2004), "meaningful access to technology requires not only physical access but also the ability to use it effectively across contexts," emphasizing the importance of adaptable digital learning environments.

Addressing connectivity and device constraints is not merely a technical concern but an ethical and institutional responsibility. Ensuring equitable access supports academic integrity, engagement, and inclusion, preventing disadvantage due to socioeconomic or geographic factors. As highlighted by Commission on Higher Education (2023), "institutions must ensure that flexible learning arrangements uphold equity and access for all students regardless of circumstance."

Therefore, mitigating connectivity and device limitations supports equitable access for all students, reduces disruptions to learning, promotes inclusivity and academic continuity, and reinforces institutional commitment to quality education. As argued by Diana Laurillard (2012), "inclusive digital learning design must account for the realities of learner access and context" (p. 112), ensuring that hybrid learning systems remain resilient, flexible, and student-centered.

Student Workload and Clarity

Equity in hybrid learning extends beyond access to technology; it also encompasses fair and manageable academic expectations. Students in hybrid courses navigate both online and face-to-face components, often alongside personal, work, or family responsibilities. Without clear guidance on workload and expectations, learners may experience stress, confusion, or burnout, which can negatively affect engagement and academic performance. As emphasized by John Sweller (1988), "Excessive cognitive load can interfere with learning and problem solving," highlighting the importance of balancing academic demands in learning environments.

Careful planning and transparent communication are essential to manage workload effectively. Weekly time-on-task estimates provide students with realistic expectations of the time required to complete readings, assignments, and participation activities. Consolidating deadlines and clearly mapping assessment schedules prevent overlapping submissions and reduce cognitive overload. This structure enables students to plan their study schedules, balance commitments, and engage more meaningfully with course content. According to Linda Nilson and Ludwika Goodson (2018), "Clear organization and communication in online and blended courses contribute significantly to student success and satisfaction."

Progress trackers and dashboards within Learning Management Systems (LMS) serve as visual tools to help students monitor their completion of activities, identify upcoming tasks, and self-regulate learning. Such tools promote autonomy and accountability, empowering students to manage their workload proactively. Clear communication regarding grading policies, participation requirements, and learning outcomes ensures that students are fully informed and reduces anxiety stemming from uncertainty. Barry J. Zimmerman (2002) stated that "Self-regulated learners are proactive in setting goals, monitoring progress, and managing their learning strategies," emphasizing the value of LMS tools in hybrid learning environments.

By establishing transparent and well-structured workload management, hybrid programs not only enhance equity but also support student well-being and sustainability. Learners are better able to balance academic responsibilities with personal or professional obligations, which is crucial in maintaining motivation, engagement, and long-term success. Furthermore, this approach fosters a sense of fairness, as all students are provided with equal access to information and expectations, regardless of their circumstances. UNESCO (2021) emphasized that "Education systems must ensure inclusion, equity, and learner well-being in adapting to future educational challenges."

Ultimately, managing student workload and clarity promotes equitable participation and access to learning, prevents overload and burnout, supports student well-being, and enhances autonomy and self-regulation through clear guidelines and progress tracking. It also aligns with institutional goals of sustainability, fairness, and academic excellence. According to D. Randy Garrison and Norman D. Vaughan

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(2013), "Successful blended learning depends on thoughtful course design, clear expectations, and meaningful student engagement."

Effective workload management is therefore a key element of risk mitigation in hybrid learning, ensuring that courses remain both challenging and manageable while supporting diverse learner needs. As noted by OECD (2021), "Flexible and sustainable learning systems require structures that support both academic achievement and student well-being."

Alignment of the Review with the Study Variables

This section explicitly aligns the reviewed literature with the key variables of the present study, demonstrating how existing scholarship informs and supports the investigation of institutional support, perceived benefits, and perceived challenges of the Hybrid Learning Program, as well as their interrelationships. By mapping empirical and theoretical findings to the study variables, the review ensures that the research framework is grounded in evidence-based insights.

Independent Variable : Level of Satisfaction with Institutional Support

Institutional support is consistently identified in the literature as a foundational determinant of successful hybrid learning implementation. Studies highlight that the availability, accessibility, and quality of institutional resources directly affect students' academic experiences, engagement, and overall satisfaction. This includes platform readiness, access to learning materials, technical and technological assistance, faculty preparedness, and clarity of administrative policies.

Platform readiness and access to learning resources are central to the success of hybrid learning. Bokolo et al. (2022) and Muya et al. (2025) emphasize that a standardized Learning Management System (LMS), such as Moodle, Canvas, or Blackboard, enhances consistency, facilitates communication, and ensures the persistence of learning records. Students' satisfaction is significantly influenced by the accessibility and user-friendliness of course materials, interactive tools, and assessment resources.

Technical and technological assistance also shapes perceptions of institutional support. Prompt, reliable IT support, device-loan programs, and low-bandwidth alternatives help mitigate digital inequities, ensuring that all learners can fully engage with the hybrid model (Muya et al., 2025; CHED, 2023). Such support contributes to a sense of fairness and equity, which is integral to student satisfaction.

Faculty preparedness is another key component. Gudoniene et al. (2025) and Hatcher et al. (2022) note that instructors' digital competence, pedagogical skills, and ability to integrate online and face-to-face modalities profoundly affect the quality of learning. Students perceive courses as more coherent and engaging when instructors demonstrate confidence and consistency in hybrid instructional delivery.

Clarity and consistency of institutional policies further influence satisfaction. Research by Kniffin and Greenleaf (2020) and CHED (2023) underscores the importance of predictable course structures, transparent guidelines, and well-communicated expectations. When institutional policies are clear, students can focus on learning rather than navigating administrative ambiguity, fostering trust and a positive perception of support.

Taken together, these dimensions of institutional support provide a robust framework for measuring student satisfaction in the context of hybrid learning. The literature confirms that high-quality support is not limited to the provision of technology; it encompasses holistic planning, equitable access, faculty development, and clear governance structures. By operationalizing institutional support across these indicators, the present study ensures that the independent variable is comprehensively grounded in empirical and theoretical evidence, providing a valid basis for exploring its relationship with perceived benefits and challenges of hybrid learning.

Dependent Variable 1

The perceived benefits of hybrid learning are the positive outcomes students experience from engaging with a program that integrates online and face-to-face instructional modalities. The reviewed

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literature consistently highlights multiple dimensions of benefits that align with the indicators used in this study, providing a strong theoretical and empirical foundation.

Flexibility of Learning Modalities

Flexibility is frequently cited as a principal advantage of hybrid learning. Mulenga and Shilongo (2024) emphasize that students can manage their own learning pace, schedule, and location, balancing academic responsibilities with personal, family, or work obligations. This flexibility allows learners to revisit recorded lectures, complete asynchronous assignments at convenient times, and engage with learning materials independently. Such autonomy not only enhances time management but also fosters self-regulated learning, a key indicator of academic resilience and engagement.

Accessibility of Learning Resources

The accessibility of course materials through online platforms significantly contributes to continuity and equity in education. UNESCO (2023) notes that centralized LMS platforms, cloud-based storage, and downloadable content enable students to access essential resources regardless of location or temporary disruptions. This access ensures that students remain connected to their learning journey even during emergencies, health-related absences, or technical constraints, making hybrid learning particularly resilient in uncertain contexts.

Enhancement of Technological Skills

Sustained engagement in hybrid environments consistently improves students' digital literacy and technological competence. By navigating LMS platforms, online collaborative tools, and multimedia content, students develop skills essential for 21st-century workplaces. The literature highlights that hybrid learning not only teaches subject matter but also equips students with practical competencies in digital communication, virtual collaboration, and online research (Niyomves et al., 2024; Gudoniene et al., 2025).

Student Engagement and Interaction

Active participation and social presence are important outcomes of hybrid learning. Niyomves et al. (2024) and Gudoniene et al. (2025) demonstrate that well-designed hybrid courses foster peer-to-peer collaboration, reflective discussions, and instructor-student interaction, enhancing critical thinking and reinforcing knowledge acquisition. Online forums, synchronous discussions, and structured group activities promote deeper engagement while complementing face-to-face experiential learning.

Continuity of Education

Hybrid learning ensures that education remains uninterrupted, even during crises such as natural disasters, public health emergencies, or institutional disruptions. The literature underscores the resilience of hybrid models, which maintain instructional continuity while supporting student learning outcomes (UNESCO, 2023). Continuity not only mitigates learning loss but also strengthens institutional credibility and students' confidence in their academic progression.

Synthesis and Alignment with Study Indicators

These identified benefits—flexibility, accessibility, enhanced technological skills, engagement, and continuity—directly inform the operationalization of the dependent variable in this study. By examining students' perceptions across these dimensions, the research can comprehensively assess the extent to which hybrid learning positively impacts their academic experience and personal development. The literature affirms that hybrid learning is not merely a contingency model but a strategically designed instructional approach that integrates pedagogical innovation, technology, and learner-centered practices to maximize benefits.

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Dependent Variable 2

The perceived challenges of hybrid learning refer to the difficulties or barriers experienced by students and faculty in the implementation of programs that combine online and face-to-face modalities. These challenges are well-documented in the literature and provide a solid empirical basis for the operationalization of this variable in the present study.

Internet Instability and Technological Limitations

A major challenge in hybrid learning is the reliance on stable internet connectivity and functional digital devices. Muya et al. (2025) and CHED (2023) highlight that students in developing regions often face limited bandwidth, intermittent connectivity, and outdated devices, which can disrupt synchronous sessions, delay submission of assignments, and hinder access to learning resources. Similarly, technological limitations—including insufficient software, unfamiliar platforms, and lack of technical support—can compromise instructional quality and equity. Addressing these issues requires institutional interventions such as device loan programs, offline-compatible content, and flexible deadlines.

Reduced Social Interaction and Feelings of Isolation

Hybrid learning, particularly its online component, can reduce opportunities for spontaneous social interaction, peer-to-peer engagement, and collaborative learning. Kniffin and Greenleaf (2020) emphasize that limited face-to-face contact may lead to feelings of isolation, decreased motivation, and reduced participation. Students may struggle to build relationships, seek clarification, or engage in meaningful dialogue, all of which are crucial for learning and personal development. Well-designed synchronous sessions, structured group activities, and community-building strategies are therefore necessary to mitigate these social challenges.

Motivation and Participation Challenges

The hybrid format requires a high degree of self-regulation and intrinsic motivation from students. Without clear guidance, structured tasks, and consistent feedback, learners may procrastinate, disengage, or underperform. Literature highlights that fluctuating motivation and inconsistent participation are common challenges, especially when asynchronous components dominate the course structure (Mulenga & Shilongo, 2024; Niyomves et al., 2024). Institutions must therefore design balanced schedules that combine synchronous anchors with asynchronous flexibility to sustain engagement.

Faculty Adaptation Concerns

Faculty adaptation is a significant challenge in hybrid learning implementation. Reyes and Serrano (2025) note that instructors often face increased workload, instructional redesign, and digital fatigue when integrating online and face-to-face modalities. The demands of learning new technology, creating digital content, and monitoring online engagement can strain faculty, potentially affecting teaching quality and student satisfaction. Professional development programs, technical support, and workload management are critical to address these challenges and maintain instructional effectiveness.

Synthesis and Alignment with Study Indicators

These challenges—connectivity and technological limitations, reduced social interaction, motivation and participation difficulties, and faculty adaptation concerns—directly inform the operationalization of the dependent variable in this study. By examining students' and instructors' perceptions across these dimensions, the research can provide a comprehensive assessment of the extent to which hybrid learning implementation presents obstacles to learning, engagement, and instructional efficiency.

The literature confirms that understanding and mitigating these challenges is essential for designing resilient, inclusive, and effective hybrid learning programs. Addressing these barriers not only improves

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student outcomes but also enhances faculty experience and supports institutional goals of academic quality, equity, and sustainability.

Interrelationship of Variables

The literature consistently emphasizes that institutional support, perceived benefits, and perceived challenges of hybrid learning are interrelated, forming a dynamic system that shapes the overall effectiveness of instructional delivery and student experience. Understanding these relationships is crucial to explaining how hybrid learning outcomes emerge and to identifying areas for targeted intervention.

Institutional Support as a Foundational Determinant

Institutional support—including platform readiness, availability of learning resources, technical assistance, faculty preparedness, and clear administrative policies—serves as the foundation for successful hybrid learning (Bokolo et al., 2022; Gudoniene et al., 2025; Muya et al., 2025). Well-structured support systems enable students to navigate both online and face-to-face components effectively, promoting clarity, accessibility, and confidence in the learning process. Conversely, inadequate support exacerbates difficulties, leading to increased technological barriers, confusion about course requirements, and diminished engagement (Kniffin & Greenleaf, 2020; CHED, 2023).

Institutional Support and Perceived Benefits

Research demonstrates a positive correlation between institutional support and students' perception of benefits. When resources are accessible, instructors are prepared, and administrative guidelines are clear, students are more likely to experience flexibility, continuity of education, enhanced digital skills, and sustained engagement (Mulenga & Shilongo, 2024; Niyomves et al., 2024; UNESCO, 2023). Institutional support acts as an enabling factor that maximizes the advantages of hybrid learning, allowing students to leverage both online and face-to-face modalities effectively.

Institutional Support and Perceived Challenges

Similarly, institutional support is inversely related to perceived challenges. Adequate guidance, technological infrastructure, and faculty readiness mitigate connectivity issues, reduced social interaction, motivational dips, and faculty adaptation concerns (Reyes & Serrano, 2025; Muya et al., 2025). In the absence of strong support, students may encounter greater difficulty in completing tasks, participating actively, and maintaining engagement, which can diminish the overall effectiveness and equity of hybrid learning programs.

Perceived Benefits and Perceived Challenges

The literature also suggests that the realization of benefits is closely tied to the mitigation of challenges. When challenges such as unstable internet connectivity, lack of guidance, or limited interaction are minimized, students can experience higher flexibility, deeper engagement, and improved learning outcomes (Niyomves et al., 2024; Gudoniene et al., 2025). Conversely, persistent challenges can undermine the perceived advantages of hybrid learning, reducing satisfaction and engagement.

Implications for Research Design

This theoretical linkage provides empirical justification for examining the relationships among institutional support, perceived benefits, and perceived challenges. By exploring these interconnections, researchers can identify which aspects of support most strongly influence outcomes and which challenges most significantly hinder learning. This alignment reinforces the appropriateness of a descriptive–correlational research design, which seeks to measure the level of satisfaction, extent of benefits, and challenges, and to determine whether significant relationships exist among these variables.

Overall, the interrelationship of variables highlights a systems-oriented perspective: institutional support shapes the hybrid learning experience by facilitating benefits and mitigating challenges, while the

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extent of benefits and challenges influences student satisfaction, engagement, and academic performance. This conceptual understanding strengthens the study's rationale and provides a cohesive framework for data collection, analysis, and interpretation.

Synthesis and Research Gap

The reviewed literature demonstrates that hybrid learning is a highly versatile instructional approach that integrates online and face-to-face modalities to enhance educational experiences. Research consistently identifies key benefits, including flexibility in scheduling and pacing, increased accessibility of learning resources, continuity of education during disruptions, and the development of digital literacy skills (Mulenga & Shilongo, 2024; UNESCO, 2023; Niyomves et al., 2024). These benefits suggest that hybrid learning can accommodate diverse student needs, promote self-regulated learning, and prepare students for digitally mediated professional environments.

However, the effectiveness of hybrid learning is contingent upon several critical factors. Institutional support, instructional coherence, and equitable access emerge as foundational determinants of success. Institutional support, including platform readiness, faculty preparedness, and clear administrative policies, directly affects student satisfaction and engagement (Gudoniene et al., 2025; Bokolo et al., 2022). Instructional coherence—ensuring alignment between online and face-to-face components—prevents cognitive overload and enhances learning continuity (Kniffin & Greenleaf, 2020). Equity considerations, particularly in developing-country contexts, highlight the importance of addressing connectivity constraints, technological limitations, and access disparities to avoid marginalizing students (Muya et al., 2025; CHED, 2023).

Despite the growing global research on hybrid learning, there is a noticeable gap in locally contextualized studies, particularly in Philippine higher education. Existing literature tends to focus on STEM disciplines or professional programs, with limited exploration of General Education (GE) courses, in which hybrid learning may pose unique challenges related to student engagement, faculty adaptation, and institutional coordination. Furthermore, few studies systematically examine the interplay between institutional support, perceived benefits, and challenges, leaving a critical area of inquiry unaddressed in local contexts.

This research gap underscores the need for a context-specific study examining hybrid learning at the University of Perpetual Help System DALTA–Calamba Campus. By focusing on students' satisfaction perceptions, the extent of perceived benefits, and the nature of challenges, the present study aims to provide empirical evidence directly applicable to Philippine GE programs. Findings from this study can inform institutional policies, enhance instructional design, and guide faculty development initiatives. Moreover, it contributes to the broader discourse on hybrid education by providing localized insights that bridge global best practices with the realities of Philippine higher education, ultimately supporting continuous improvement and equitable access in hybrid learning environments.

METHODS

Research Design

This study employed a quantitative descriptive and correlational research design to examine the benefits and challenges associated with implementing the hybrid learning program in General Education courses at the college level of the University of Perpetual Help System DALTA–Calamba Campus. The descriptive approach was deemed appropriate because it enabled the researcher to collect measurable data from a defined population and systematically describe existing conditions without manipulating any variables. According to John W. Creswell and J. David Creswell (2018) notes that descriptive research allows investigators to observe and document phenomena as they naturally occur, providing a clear representation of participants' perceptions and experiences.

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Through the administration of structured survey questionnaires, the study collected quantitative data on students' perceptions of the effectiveness, advantages, and limitations of hybrid learning modalities. The use of quantitative methods facilitated statistical analysis of responses, enabling the researcher to identify trends, patterns, and potential relationships among variables relevant to hybrid learning. The descriptive–quantitative framework therefore provided an objective basis for interpreting students' experiences within the hybrid learning environment, consistent with the methodological principles discussed by Consuelo G. Sevilla and colleagues (1992).

Respondents and Sampling Technique

The study's respondents comprised two groups: college students enrolled in General Education courses and the General Education teaching and non-teaching staff at the University of Perpetual Help System DALTA–Calamba Campus during the academic year 2025–2026. The total population of college students enrolled in General Education subjects is 1,770, and there are 26 teaching and non-teaching General Education staff members. Only students and General Education staff who had experienced both online and face-to-face instructional modalities under the hybrid learning implementation were included in the study to ensure that participants had adequate exposure to the learning approach under investigation.

A total of 701 students (39%) and 21 teaching and non-teaching staff (81%) participated in the research. These respondents (students) represented various colleges and academic programs across different year levels within the university. To ensure a fair representation of the student population, the study utilized a random sampling technique. This probability-based sampling method ensured that each member of the target population had an equal chance of being selected, thereby enhancing the representativeness and generalizability of the findings. Random sampling is widely recommended for studies involving large populations because it strengthens the accuracy of statistical estimates and minimizes sampling bias, as discussed by Xiaoqing Qin and Ahmed Elhafian (2023).

In addition to student respondents, faculty members and academic administrators were also included as key informants to provide complementary perspectives on the perceived advantages and challenges of the hybrid learning program. Their participation enriched the analysis by ensuring that the program evaluation extended beyond student perceptions and incorporated insights from instructional and institutional perspectives.

Research Instrument

The primary data collection instrument utilized in this investigation was a structured survey questionnaire developed by the researcher. The instrument was constructed based on the Statement of the Problem, the theoretical foundations underpinning the study, and a comprehensive review of related literature concerning hybrid learning systems in higher education. The questionnaire was designed to generate quantitative data related to the key variables of the research, including the Hybrid Learning Program, the Institutional Support and Management System, the Perceived Benefits, and the Perceived Challenges encountered by students.

The questionnaire consisted of several sections. The first section collected demographic information about the respondents, including age, gender, year level, and academic program. These variables provided a descriptive profile of the participants and allowed the researcher to contextualize the results within the broader student population.

The second section evaluated the implementation of the Hybrid Learning Program using four primary indicators: online learning implementation, face-to-face instructional delivery, learning activities and assessment strategies, and communication and feedback mechanisms. These indicators were utilized to assess the effectiveness of the hybrid learning approach in delivering instruction, engaging students in meaningful learning experiences, and ensuring consistent interaction between teachers and learners.

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Furthermore, the indicators provided a comprehensive basis for determining how the program supports student learning and adapts to the demands of both virtual and in-person educational environments.

Each indicator included several statements to assess students' perceptions of the organization, clarity, and overall effectiveness of the hybrid instructional approach.

The third section examined the Institutional Support and Management System, focusing on four essential dimensions: the availability of learning resources, access to technological and technical assistance, faculty preparedness and professional training, and the clarity of administrative policies and institutional guidelines. This component assessed the extent to which institutional mechanisms either supported or constrained the effective implementation of hybrid learning.

The fourth section explored the perceived benefits of the hybrid learning program. Five key areas were considered in this evaluation: flexibility in learning schedules, accessibility of digital learning materials, enhancement of technological competencies, improvement in student engagement, and the continuity of education despite external constraints. These indicators enabled the researcher to determine the advantages students experienced within the hybrid learning framework.

The fifth section explores the perceived challenges of the hybrid learning program. Five key areas were considered in this evaluation: internet stability and connectivity issues; technological limitations and access to devices; reduced social interaction and sense of community; student motivation, participation, and self-discipline; and faculty adaptation concerns, including workload and instructional adjustments. These indicators enabled the researcher to identify the challenges students experienced within the hybrid learning framework.

Responses were measured on a five-point Likert scale, allowing participants to indicate the extent to which they agreed or disagreed with each statement. The scale ranged from Strongly Agree (5) to Strongly Disagree (1), thereby enabling respondents to express the intensity of their perceptions regarding each aspect of the hybrid learning experience.

Five-Point Likert Scale

Point	Scale Range	Verbal Interpretation
5	5.00-4.21	Strongly Agree
4	3.41 – 4.20	Agree
3	2.61 – 3.40	Neutral
2	1.81 – 2.60	Disagree
1	1.00 – 1.80	Strongly Disagree

Note: 5-Strongly Agree, 4-Agree, 3-Neutral, 2-Desagree, 1Strongly Agree

Validation and Reliability

To ensure the content validity of the research instrument, the questionnaire was submitted to three experts in education and research methodology for evaluation. These validators assessed the clarity, relevance, and alignment of the questionnaire items with the study's conceptual variables. Their feedback and recommendations were carefully reviewed, and necessary revisions were incorporated to improve the instrument's accuracy and appropriateness.

A pilot test was subsequently conducted with 30 students enrolled in a comparable academic program to assess the questionnaire's reliability. The responses obtained from the pilot test were subjected to reliability analysis using Cronbach's Alpha. The resulting reliability coefficient was approximately 0.87, indicating a high level of internal consistency and confirming that the instrument was suitable for measuring the intended constructs, consistent with the findings reported by Raquel Ursua and Maria Dela Cruz (2022). Consequently, the validated and reliable questionnaire served as the primary instrument for collecting data necessary to address the research objectives.

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Data Gathering Procedure

Prior to data collection, formal permission to conduct the study was obtained from the School Director of the University of Perpetual Help System DALTA–Calamba Campus and the Dean of the College of Arts, Sciences, and Education. Following the approval process, the researcher coordinated with instructors responsible for General Education courses to facilitate the distribution of survey questionnaires to the target respondents.

Data collection was conducted through both online and printed survey formats. The online questionnaire was administered via Google Forms, allowing respondents with stable internet access to participate conveniently. Meanwhile, printed copies of the survey were distributed during face-to-face class sessions to accommodate students with limited or inconsistent internet connectivity.

Before completing the questionnaire, all participants received a brief explanation of the study's purpose and the voluntary nature of their participation. After the responses were collected, the data were systematically organized, coded, and prepared for statistical analysis using appropriate descriptive and inferential techniques.

Statistical Treatment of Data

To analyze the collected data, several statistical procedures were employed. Mean scores and standard deviations were computed to describe respondents' perceptions of the Hybrid Learning Program, the Institutional Support and Management System, and the perceived benefits and challenges of hybrid learning. The mean served as the basis for determining the overall level of agreement of students regarding each indicator, including online learning implementation, face-to-face instructional delivery, learning activities and assessment practices, communication and feedback processes, institutional resources, technological support, faculty preparedness, and administrative policies. The standard deviation, on the other hand, indicated the degree of variability among responses, revealing the consistency or dispersion of students' evaluations.

To determine the relationship between the Hybrid Learning Program and students' perceived benefits and challenges, the Spearman rank correlation coefficient (r) was used. This statistical measure assessed both the strength and direction of the linear relationship between the variables. A positive correlation coefficient indicated that higher levels of effective hybrid learning implementation were associated with greater perceived benefits or reduced challenges. Conversely, a negative coefficient suggested that stronger implementation corresponded with fewer perceived benefits or greater challenges. An r-value close to zero indicated the absence of a meaningful linear relationship.

Descriptive statistics, including frequency counts and percentages, were also utilized to summarize respondents' demographic characteristics such as age, gender, year level, and academic program. The interpretation of Likert-scale responses followed weighted mean descriptors appropriate for the study.

All statistical analyses were performed using IBM SPSS Statistics for inferential computation and Microsoft Excel for data organization and preliminary descriptive analysis. The level of significance was set at $\alpha = 0.05$, indicating that results with p-values lower than 0.05 were considered statistically significant. This threshold implied a five-percent probability of committing a Type I error, thereby ensuring that the conclusions drawn from the analysis were supported by adequate statistical evidence.

Ethical Considerations

The study strictly adhered to established ethical standards in the conduct of academic research. Prior to data collection, all potential participants were fully informed about the purpose of the study, the procedures involved, and the voluntary nature of their participation. This process was carried out in accordance with the guidelines established by the university's Research Ethics Committee (2025).

Each respondent was provided with an informed consent form explaining that participation in the study was entirely voluntary and that all personal information would remain confidential. Participants were also assured that the data collected would be used exclusively for academic and research purposes.

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Throughout the research process, the investigator ensured that no form of coercion, deception, or harm occurred at any stage of the study. To maintain strict confidentiality, all responses were anonymized and stored securely in password-protected digital files accessible only to the researcher.

The management and protection of personal information complied with the provisions of the Data Privacy Act of 2012, which mandates the lawful processing, storage, and protection of personal and sensitive data in research activities. By adhering to these ethical and legal standards, the study safeguarded the rights, dignity, and privacy of all participants involved.

RESULTS AND DISCUSSION

Table 1 presents students' perceptions of institutional support in the hybrid learning program. The results show consistently high levels of satisfaction across all indicators, with mean scores ranging from 4.29 to 4.45, all interpreted as *Highly Satisfied*. This indicates that students generally perceive the institution as providing effective support through its services, resources, and learning assistance. The findings suggest that the institution has successfully created a supportive learning environment that meets students' academic and technological needs. Adequate institutional support is important in hybrid learning because it enhances students' engagement, motivation, and overall learning experience. These results support the findings of Terry Anderson (2008), who emphasized the importance of institutional support in promoting effective learning in online and blended environments, and Barry J. Zimmerman (2002), who highlighted the role of supportive learning environments in fostering student motivation and academic. Among the various dimensions, *Learning Resources and Academic Support received the highest rating (M = 4.45),* followed closely by *Faculty and Student Preparedness (M = 4.40)* and *Overall Institutional Support (M = 4.40).* These results suggest that students perceive the institution as providing not only adequate resources but also a well-structured support system that facilitates the smooth implementation of hybrid learning modalities. The prominence of learning resources in students' evaluations highlights the critical role of accessible instructional materials, digital platforms, and continuous academic guidance in promoting effective learning experiences.

Table 1. *Students' Level of Satisfaction*

Constructs	Mean	Interpretation
1.1 Technological infrastructure and technical support	4.29	Very Satisfied
1.2 Learning Resources and Academic Support	4.45	Very Satisfied
1.3 Faculty and Student Preparedness	4.40	Very Satisfied
1.4 Administrative Support and Communication	4.39	Very Satisfied
1.5 Overall Institutional Support	4.40	Very Satisfied

These findings corroborate existing literature emphasizing that successful hybrid learning environments rely heavily on the presence of *organized support mechanisms and easily navigable digital resources* (Kniffin & Greenleaf, 2020). When students have access to clearly defined course structures, comprehensive learning materials, and consistent guidance from faculty, they are more likely to view the learning process as coherent, manageable, and engaging (Gudoniene et al., 2025). Consequently, institutions that prioritize the availability of academic support and instructional resources can enhance students' overall satisfaction and foster higher levels of academic engagement, self-regulation, and learning continuity within hybrid frameworks.

Despite the generally positive perceptions of hybrid learning, the findings presented in Table 2 indicate that students continue to encounter notable challenges associated with this instructional modality. The mean scores for these challenges ranged from 3.95 to 4.10. All indicators were interpreted as Challenging, indicating that students perceive these issues as notable concerns that may affect their learning experience; however, they remain manageable and do not appear to hinder students' overall participation

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and engagement in the hybrid learning environment. Among the indicators, *Internet stability and connectivity issues* emerged as the most pressing concern (M = 4.10), followed closely by *technological limitations and access to devices* (M = 4.05), and *student motivation, participation, and self-discipline* (M = 3.98). These results underscore that while hybrid learning provides substantial advantages—such as flexibility, access to resources, and opportunities for self-directed learning—its effectiveness is contingent on the availability and reliability of technological infrastructure, as well as students' capacity for autonomous learning. The findings indicate that students agreed that hybrid learning reduces social interaction and the sense of community (M=3.96). Limited face-to-face interaction may affect student engagement, participation, and sense of belongingness. Thus, institutions must promote more collaborative and interactive activities in hybrid learning environments.

Table 2. *Challenges of Hybrid Learning According to Students*

Constructs	Mean	Interpretation
2.1 internet stability and connectivity issues;	4.10	Challenging
2.2 technological limitations and access to devices;	4.05	Challenging
2.3 reduced social interaction and sense of community;	3.96	Challenging
2.4 student motivation, participation, and self-discipline;	3.98	Challenging
2.5 faculty adaptation concerns, including workload and instructional adjustments.	3.95	Challenging

Reliable internet connectivity and access to functional digital devices are critical prerequisites for engaging in synchronous online sessions, accessing digital learning resources, and completing assessments in a timely manner. Disparities in access to technology, however, may disproportionately affect students, particularly those in rural or underserved areas, thereby limiting their full participation in hybrid learning activities. Empirical studies have consistently highlighted that technological barriers remain a persistent obstacle to effective hybrid instruction, particularly in developing contexts, as they impede equitable access and reduce instructional inclusivity (Muya et al., 2025).

In addition to technological constraints, hybrid learning places considerable demands on students' *self-regulation and independent learning skills*. The asynchronous components of hybrid programs, while offering flexibility, require learners to manage their own time effectively, monitor their progress, and sustain motivation without the immediate presence of instructors (Mulenga & Shilongo, 2024). Students who struggle with self-discipline may have difficulty meeting deadlines, maintaining consistent participation, and achieving desired learning outcomes. Consequently, addressing both technological and self-regulatory challenges is essential to maximize the benefits of hybrid learning and to ensure that all students can engage meaningfully and equitably in this instructional approach.

Table 3. *Benefits of Hybrid Learning According to Students*

Constructs	Mean	Interpretation
3.1 flexibility of learning modalities;	4.33	Highly Beneficial
3.2 accessibility and availability of learning resources;	4.34	Highly Beneficial
3.3 enhancement of students' technological and digital skills;	4.32	Highly Beneficial
3.4 level of student engagement and interaction;	4.26	Highly Beneficial

The results presented in Table 3 reveal that students perceived the benefits of hybrid learning positively, with mean scores ranging from 4.26 to 4.34, all interpreted as "Highly Beneficial." Among the indicators, Accessibility and Availability of Learning Resources received the highest mean (M = 4.34), followed closely by Flexibility of Learning Modalities (M = 4.33) and Enhancement of Students' Technological and Digital Skills (M = 4.32). These findings indicate that students highly value the convenience, adaptability, and skill-development opportunities provided by the hybrid learning program.

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These findings indicate that students strongly acknowledge the advantages of hybrid learning, particularly its ability to provide flexible, *accessible educational opportunities* that accommodate diverse learning preferences and schedules. The high rating for resource accessibility underscores the importance of digital platforms and instructional materials that allow learners to *revisit lessons, review recorded lectures, and engage in asynchronous activities at their own pace,* fostering greater autonomy and encouraging self-regulated learning behaviors (Zimmerman, 2002; Mulenga & Shilongo, 2004).

The emphasis on flexibility also reflects students' appreciation of hybrid learning's ability to *integrate synchronous and asynchronous modalities*, enabling learners to balance independent study with structured interactions in face-to-face settings. Such integration has been shown to enhance learner engagement, support individualized pacing, and facilitate deeper comprehension of content (Garrison & Vaughan, 2008). Moreover, the strong perception of technological skill development suggests that exposure to digital platforms, collaborative online tools, and multimedia resources contributes meaningfully to students' *technological competence*, a critical 21st-century skill necessary for academic and professional success (Niyomves et al., 2024).

Taken together, these results highlight that hybrid learning not only provides logistical and instructional flexibility but also promotes the development of *essential digital literacy and self-directed learning skills,* positioning students to navigate increasingly technology-mediated learning environments effectively. The findings corroborate prior research demonstrating that well-structured hybrid learning environments foster both academic achievement and learner autonomy by harmonizing online and in-person instructional strategies (Mulenga & Shilongo, 2024; Garrison & Vaughan, 2008). Consequently, the perceived benefits underscore the dual impact of hybrid learning: facilitating *accessibility and convenience while simultaneously cultivating competencies that extend beyond the classroom.*

Table 4. *Level of Satisfaction Among Teaching and Non-teaching*

Constructs	Mean	Interpretation
1.1 Technological infrastructure and technical support	3.19	Moderately Satisfied
1.2 Learning Resources and Academic Support	4.12	Satisfied
1.3 Faculty and Student Preparedness	3.85	Satisfied
1.4 Administrative Support and Communication	3.67	Satisfied
1.5 Overall Institutional Support	3.71	Satisfied

The perceptions of teaching and non-teaching personnel, as presented in Table 4, reveal a pattern of responses that differs notably from those of students. While most indicators were interpreted as *"Satisfied",* the mean score for Technological Infrastructure and Technical Support (M=3.19) fell within the neutral range, indicating that faculty members neither agreed nor disagreed on the adequacy of the technological resources and technical support provided for hybrid learning. In contrast, *Learning Resources and Academic Support (M = 4.12) received the highest rating,* indicating that institutional personnel acknowledge the presence of comprehensive instructional materials, digital platforms, and support mechanisms that facilitate students' learning.

This discrepancy in perception may be attributed to the *direct operational involvement of faculty and staff in implementing hybrid learning programs*. Unlike students, who primarily experience the learning process, teaching and administrative personnel manage both the technical and logistical aspects of course delivery, including platform management, resource allocation, and troubleshooting. Consequently, they are more likely to be cognizant of technological The study identified several *limitations, workflow inefficiencies, and areas requiring targeted institutional improvement* within the hybrid learning framework. Notably, the findings underscore the pivotal role of *faculty readiness and technological infrastructure* in shaping the effectiveness of hybrid instructional delivery. Previous research has emphasized that the successful integration of digital tools alongside traditional pedagogical strategies is essential for maintaining instructional continuity, fostering student engagement, and ensuring the overall

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quality of education (Bokolo et al., 2022). In this context, the present findings reveal a nuanced perspective: although students generally perceive institutional support as sufficient, faculty and administrative staff offer a complementary viewpoint highlighting operational challenges, including *inadequate technological resources, workflow bottlenecks, and increased instructional demands*.

These divergent perceptions underscore the importance of strategic institutional interventions, particularly *investments in infrastructure and comprehensive faculty development programs*, to bridge gaps between perceived support and operational realities. By enhancing digital readiness, streamlining workflows, and equipping instructors with the competencies needed to navigate hybrid teaching modalities effectively, institutions can optimize learning outcomes and promote a more sustainable, resilient, and equitable educational environment. This alignment between *technological resources, faculty preparedness, and administrative support* is critical not only for improving student satisfaction but also for fostering a high-quality hybrid learning ecosystem that adapts to evolving educational demands.

Table 5 illustrates the perceived challenges associated with hybrid learning as experienced by both teaching and non-teaching personnel, with mean scores ranging from 3.67 to 4.04, all interpreted as Challenging. Internet stability and connectivity issues (M = 4.04) emerged as the most prominent challenge, emphasizing the need for improved technological infrastructure and support to facilitate effective hybrid learning, highlighting the critical role of reliable technological infrastructure in sustaining hybrid instruction. This was followed by *technological limitations and limited access to devices (M = 3.85)*, and reduced social interaction and a diminished sense of community (M = 3.76), indicating that faculty and staff are acutely aware of both operational and pedagogical obstacles to implementing hybrid learning. These findings underscore the multifaceted nature of hybrid education, in which educators must navigate technological constraints while fostering meaningful interactions and engagement in both virtual and face-to-face contexts.

The challenges reported reflect the substantial *demands placed on instructors* within hybrid environments. Faculty members are required not only to redesign traditional course materials for online and blended delivery but also to manage digital learning platforms, monitor student participation in synchronous and asynchronous activities, and provide timely and constructive feedback across multiple instructional modalities. Such responsibilities inevitably *increase faculty workload* and necessitate significant adjustments in pedagogical approaches to maintain the quality and effectiveness of instruction. This observation aligns with the findings of Reyes and Serrano (2025), who emphasize that *faculty adaptation, targeted professional development, and digital competency training are crucial to sustaining instructional excellence* in hybrid learning contexts. Without adequate support and training, educators may struggle to integrate technology effectively, maintain student engagement, and ensure continuity of learning across modalities.

Table 5. *Perceived Challenges of Hybrid Learning Among Teaching and Non-teaching Personnel*

Constructs	Mean	Interpretation
2.1 internet stability and connectivity issues;	4.04	Challenging
2.2 technological limitations and access to devices;	3.85	Challenging
2.3 reduced social interaction and sense of community;	3.76	Challenging
2.4 student motivation, participation, and self-discipline;	3.67	Challenging
2.5 faculty adaptation concerns, including workload and instructional adjustments.	3.69	Challenging

Collectively, these findings highlight that while hybrid learning offers flexibility and accessibility, its successful implementation depends heavily on *institutional support, robust infrastructure, and continuous faculty capacity building*. Addressing these challenges is essential not only to enhance the teaching and learning experience but also to ensure that hybrid education can achieve its intended pedagogical objectives in higher education settings.

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Table 6 shows that both teaching and non-teaching personnel recognize and appreciate the benefits of hybrid learning, with mean scores ranging from 4.00 to 4.23, corresponding to interpretations of "Beneficial" or "Highly Beneficial". Among these dimensions, Flexibility of Learning Modalities received the highest rating (M = 4.23), indicating that educators particularly value the adaptability and practical application of hybrid instructional approaches in meeting diverse teaching and learning needs. This finding suggests that faculty perceive hybrid learning as a versatile pedagogical model capable of accommodating diverse student needs and varying instructional contexts

Table 6. *Benefits of Hybrid Learning Among Teaching and Non-teaching Personnel*

Constructs	Mean	Interpretation
3.1 flexibility of learning modalities;	4.23	Highly Beneficial
3.2 accessibility and availability of learning resources;	4.00	Beneficial
3.3 enhancement of students' technological and digital skills;	4.10	Beneficial
3.4 level of student engagement and interaction;	4.00	Beneficial

Hybrid learning integrates synchronous and asynchronous learning opportunities, allowing students to access course materials at their own pace while engaging with instructors and peers during real-time sessions. This blended structure not only promotes *continuity of instruction* during potential disruptions but also supports sustained student engagement and participation when planned and implemented effectively. The adaptability inherent in hybrid models enables institutions to maintain instructional quality and accessibility, allowing learning to continue uninterrupted regardless of external constraints. Empirical and policy-oriented studies support these findings, emphasizing that hybrid learning environments enhance educational resilience, foster autonomous learning, and improve engagement by combining the strengths of digital platforms with face-to-face interactions (UNESCO, 2023; Mulenga & Shilongo, 2024).

Overall, the perspectives of teaching and non-teaching personnel highlight the *critical role of flexibility in hybrid learning* as a key factor in ensuring that instructional objectives are met while accommodating varying student schedules, technological capabilities, and pedagogical requirements. Such recognition underscores the importance of institutional planning, technological readiness, and faculty preparedness in the successful implementation of hybrid education models.

As reflected in Table 7, the results indicate a *strong positive relationship between the level of satisfaction and perceived benefits among students ($\rho = 0.79$, $p < 0.01$)*. This finding suggests that students who report higher satisfaction with the hybrid learning program are also more likely to recognize its advantages. Such benefits may include flexibility in accessing course materials, the ability to learn at one's own pace, improved technological competencies, and continuity of learning across different instructional modalities. Studies have emphasized that hybrid learning environments allow students to access learning materials asynchronously, revisit instructional content, and participate in interactive learning activities, thereby promoting self-regulated learning and greater academic engagement (Mulenga & Shilongo, 2024). Moreover, the accessibility of learning resources through digital platforms, such as Learning Management Systems, enables students to remain connected to instructional materials regardless of time or location, thereby enhancing the overall learning experience (UNESCO, 2023). These benefits reinforce the importance of institutional readiness, effective instructional design, and technological support in shaping positive student perceptions of hybrid learning environments.

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Table 7. *Significant Relationships Perceive by Students*

Relation	Spearman Correlation	Sig. p-value	Interpretation
Level of Satisfaction (x) and Perceived Benefits (y)	0.79	<0.01	Significant Positive Relationship
Level of Satisfaction (x) and Perceived Challenges (y)	0.43	<.001	Significant Positive Relationship
Perceive Benefits and Perceive Challenges	0.27	<.001	Significant Positive Relationship

The analysis also reveals a *moderate positive relationship between students' level of satisfaction and perceived challenges ($\rho = 0.43$, $p < .001$)*. Although the positive relationship may initially appear contradictory, it may indicate that students who are actively engaged and satisfied with hybrid learning are also more aware of the challenges associated with this instructional model. Hybrid learning environments often require learners to navigate technological tools, manage their time effectively, and adapt to both synchronous and asynchronous learning formats. In contexts where internet connectivity is inconsistent or technological resources are limited, students may encounter barriers that influence their learning experiences (Muya et al., 2025). Furthermore, integrating digital platforms into hybrid education may increase cognitive demands as students shift between online and face-to-face instruction. When instructional coherence is not fully achieved, students may perceive learning tasks as fragmented rather than integrated (Gudoniene et al., 2025). Thus, while satisfaction may reflect positive perceptions of institutional support and learning outcomes, it does not necessarily eliminate awareness of the challenges inherent in hybrid instructional delivery.

Additionally, Table 7 shows a *weak but statistically significant positive relationship between perceived benefits and perceived challenges among students ($\rho = 0.27$, $p < .001$)*. This finding suggests that students who acknowledge the benefits of hybrid learning are also somewhat likely to recognize its accompanying difficulties. This relationship may reflect the dual nature of hybrid learning, where advantages such as flexibility and digital accessibility coexist with potential barriers such as connectivity issues, reduced opportunities for face-to-face interaction, and increased demands for independent learning. Previous research highlights that hybrid learning environments require careful alignment of instructional activities and modalities to ensure that online and in-person components function as complementary elements of a unified learning process (Kniffin & Greenleaf, 2020). When this alignment is achieved, students can maximize the benefits of hybrid learning while still acknowledging the operational and technological challenges that may arise.

Table 8 presents the perspectives of faculty members and also demonstrates significant positive relationships among the variables. The findings indicate a *moderate positive relationship between faculty members' level of satisfaction and perceived benefits ($\rho = 0.55$, $p = 0.01$)*. This suggests that instructors who are more satisfied with the hybrid learning program are also more likely to perceive instructional advantages associated with this educational approach.

Hybrid learning provides faculty with opportunities to integrate diverse instructional strategies, utilize digital tools for teaching and assessment, and facilitate both synchronous and asynchronous learning experiences. Research indicates that when faculty members receive adequate institutional support, technological resources, and professional development opportunities, they are better equipped to design and implement hybrid courses that promote meaningful learning experiences (Bokolo et al., 2022). In addition, instructor presence in online environments—through timely communication, structured learning activities, and feedback mechanisms—has been shown to strengthen student engagement and enhance the effectiveness of hybrid learning systems (Gudoniene et al., 2025).

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Table 8. *Significant Relationships Perceive by the Faculty*

Relation	Spearman Correlation	Sig. p-value	Interpretation
Level of Satisfaction (x) and Perceived Benefits (y)	0.55	0.01	Significant Positive relationship
Level of Satisfaction (x) and Perceived Challenges (y)	0.50	.024	Significant Positive Relationship
Perceive Benefits and Perceive Challenges	0.5	.024	Significant Positive Relationship

The results further reveal a moderate positive relationship between faculty members' level of satisfaction and perceived challenges ($\rho = 0.50$, $p = .024$). This finding indicates that instructors who express higher satisfaction with hybrid learning are also aware of the difficulties involved in implementing this instructional model. Faculty members often encounter challenges such as adapting traditional teaching strategies to digital platforms, redesigning course materials to accommodate both online and in-person modalities, and managing the increased workload associated with monitoring student participation in multiple learning environments. Research suggests that the transition to hybrid instruction requires faculty members to develop new competencies in digital pedagogy, technological integration, and instructional design (Reyes & Serrano, 2025). Without adequate institutional support, these responsibilities may contribute to increased workload and instructional complexity.

Finally, the findings also show a *moderate positive relationship between perceived benefits and perceived challenges among faculty ($\rho = 0.50$, $p = .024$)*. This suggests that instructors who recognize the instructional advantages of hybrid learning are also more likely to acknowledge the complexities involved in its implementation. Hybrid learning environments require continuous coordination between online and face-to-face components, careful planning of instructional activities, and consistent communication with students to maintain engagement and academic rigor. As emphasized in the literature, effective hybrid learning programs depend on the integration of pedagogical design, technological infrastructure, and institutional policies that support both instructors and students (Kniffin & Greenleaf, 2020). When these elements function cohesively, hybrid learning can enhance teaching flexibility, student engagement, and access to learning resources while addressing the challenges associated with digital and blended instructional models.

Overall, the findings from both tables demonstrate that *level of satisfaction, perceived benefits, and perceived challenges are significantly interrelated variables within the hybrid learning program.* Higher levels of satisfaction among both students and faculty are associated with greater recognition of the benefits of hybrid learning, while awareness of challenges remains but does not necessarily undermine overall satisfaction. These results highlight the importance of institutional support, instructional coherence, and technological readiness in shaping the effectiveness of hybrid learning environments. By strengthening these components, educational institutions can maximize the benefits of hybrid learning while mitigating the challenges experienced by both students and faculty.

PROPOSE HYBRID LEARNING SUSTAINABILITY PLAN (HLSP)

Introduction

The shift in educational learning programs brought about by global disruptions has enhanced the adoption of hybrid learning models in higher education. In response to these changes, universities have implemented different learning programs. One of those is hybrid learning as a flexible approach that combines face-to-face and online instruction. Based on the results of the present study, the hybrid learning program has demonstrated a high level of student satisfaction, along with significant perceived benefits such as flexibility, accessibility, and improved learning autonomy. In spite of these positive outcomes,

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several challenges remain, particularly in terms of technological limitations, student engagement, and instructional delivery.

In light of these findings, the *Proposed Hybrid Learning Sustainability Plan (HLSP)* is developed to ensure the continuous, effective, and responsive implementation of hybrid learning within the university. This plan seeks to institutionalize best practices, address existing gaps, and strengthen the overall quality of teaching and learning experiences. By focusing on strategic areas such as institutional support, technological infrastructure, and stakeholder engagement, the HLSP aims to create a resilient and adaptive learning environment.

Finally, this sustainability plan emphasizes the university's commitment to providing inclusive, innovative, and high-quality education. It serves as a proactive framework that not only maintains the gains achieved through hybrid learning but also ensures its long-term viability in meeting the evolving needs of students and educators in the modern educational landscape.

Objectives

Specifically, it aims to: *sustain student satisfaction* through consistent delivery of quality instruction, *address challenges* related to connectivity, device accessibility, and engagement, and *enhance the effectiveness* of hybrid teaching strategies through continuous training and monitoring.

Activities

These objectives will be achieved through implementation of several concrete activities. These include conducting quarterly or semestral Learning Management System (LMS) *faculty development programs and training workshops on hybrid pedagogy and digital tools, periodic assessment and upgrading* of learning management systems and technological resources, delivery of student support services such as technical assistance and learning consultations, and the application of feedback mechanisms such as surveys and focus group discussions to monitor student experiences.

Timeline

The HLSP will be implemented continuously in alignment with the academic calendar. The preparatory activities such as planning and LMS training will be conducted before the start of each semester or quarterly as part of the enrichment and training program, followed by implementation during the term, and evaluation at midterm and end-of-term periods. This timeline ensures that improvements can be made in real time and that the program remains responsive, adaptive and sustainable in addressing the needs of the students, faculty and to the needs of stakeholders.

Person In-Charge

This program will be good if it is handled by four different department, the Academic Affairs Office, Information Technology Services (ITS), CASEd Dean or OIC and Program Chairs, and faculty members. The Academic Affairs Office will oversee policy implementation and academic quality, while the ITS will ensure the reliability of technological infrastructure. Faculty members will be directly responsible for delivering instruction, and program chairs will monitor course implementation and outcomes.

Evaluation of the Program

The evaluation of the program is important to be conducted using both quantitative and qualitative measures. Surveys measuring student satisfaction, perceived benefits, and challenges will be administered regularly, alongside analysis of academic performance and engagement metrics. Feedback from faculty and students must be gathered to identify areas for improvement. The results of these evaluations will serve as the basis for continuous enhancement of the hybrid learning program, ensuring its sustainability and effectiveness in the long term.

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Table 9. *Proposed Hybrid Learning Sustainability Plan (HLSP) 2026–2027*

Objectives	Activities	Timeline	Target Year	Person In-charge	Success Indicators
Sustain student satisfaction through consistent delivery of quality hybrid instruction	Conduct faculty development programs and workshops on hybrid pedagogy, LMS utilization, digital assessment tools, and innovative teaching strategies	Before the start of each semester	AY 2026–2027	Academic Affairs Office, CASEd Dean/OIC, Program Chairs, Faculty Members	At least 90% faculty participation; improved student satisfaction ratings
Enhance faculty competencies in hybrid teaching methodologies	Organize seminars on student engagement, online facilitation, assessment, and instructional design	Quarterly	AY 2026–2027	Academic Affairs Office, Program Chairs	Increased faculty effectiveness ratings and positive student feedback
Address connectivity and technological challenges	Conduct periodic assessment and upgrading of LMS, internet connectivity, and digital infrastructure	Every semester	AY 2026–2027	Information Technology Services (ITS)	Reduced technical issues and LMS downtime; improved system reliability
Improve access to digital devices and learning resources	Implement device assistance programs and expand access to online learning resources and digital libraries	Throughout the academic year	AY 2026–2027	ITS, Academic Affairs Office, Library Services	Increased utilization of digital resources and reduced access-related concerns
Strengthen student engagement and motivation	Provide academic consultations, mentoring sessions, and virtual student engagement activities	Monthly and as needed	AY 2026–2027	Faculty Members, Program Chairs, Student Affairs Office	Improved student participation, attendance, and engagement metrics
Ensure continuous technical and academic support	Establish technical help desks, LMS support services, and online consultation schedules	Continuous	AY 2026–2027	ITS, Faculty members	Faster resolution of technical concerns and increased student satisfaction
Monitor and evaluate hybrid learning effectiveness	Conduct student satisfaction surveys, focus group discussions (FGDs), and faculty feedback sessions	Midterm and End of Term	AY 2026–2027	Academic Affairs Office, Program Chairs, Research Office	Completion of evaluation reports and implementation of improvement plans
Strengthen communication and stakeholder engagement	Disseminate regular updates, guidelines, and announcements regarding hybrid learning policies and practices	Monthly	AY 2026–2027	Academic Affairs Office, CASEd Dean/OIC, Program Chairs	Improved communication ratings and stakeholder awareness
Promote continuous	Review evaluation results and formulate action plans based on	End of Each Semester	AY 2026–2027	Academic Affairs Office, ITS, CASEd	Documented improvements and

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improvement and sustainability	identified concerns and best practices			Dean/OIC, Program Chairs	sustained positive learning outcomes

Summary of Findings

The study revealed that both students and faculty generally perceived hybrid learning positively, demonstrating high levels of satisfaction across various dimensions of institutional support. Students expressed favorable perceptions regarding technological infrastructure and technical support, learning resources and academic support, faculty and student preparedness, administrative support and communication, and overall institutional support. Among these areas, learning resources and academic support emerged as the most highly valued, highlighting the importance of accessible instructional materials, digital platforms, and consistent academic guidance in facilitating effective hybrid learning experiences. In contrast, faculty and administrative personnel, while generally satisfied with institutional support measures, expressed greater concern regarding technological infrastructure, indicating awareness of operational and technical limitations that may affect the implementation of hybrid learning.

With regard to the perceived benefits of hybrid learning, both students and faculty recognized its value in providing flexibility in learning modalities, increasing access to learning resources, and enhancing technological and digital competencies. Students particularly appreciated the accessibility and availability of learning materials, which enabled them to engage more effectively in the learning process. Likewise, teaching and non-teaching personnel emphasized the adaptability of hybrid learning as a significant advantage, noting that integrating face-to-face and online instructional approaches supports instructional continuity and accommodates diverse learning needs and paces.

Despite these positive perceptions, both groups identified several challenges associated with hybrid learning. Students cited internet connectivity concerns, limited access to devices, and difficulties with motivation and self-discipline as major obstacles. Similarly, faculty and staff reported challenges involving internet connectivity, technological limitations, and reduced opportunities for social interaction and community building. These findings demonstrate that while hybrid learning offers numerous benefits, it also presents operational, technological, and pedagogical challenges that require continuous institutional attention and support.

The study further revealed significant relationships among satisfaction, perceived benefits, and perceived challenges of hybrid learning. Among students, higher levels of satisfaction were associated with greater recognition of the benefits of hybrid learning, while awareness of challenges also showed a meaningful relationship with satisfaction. Likewise, faculty members demonstrated positive relationships among satisfaction, perceived benefits, and perceived challenges. These findings suggest that individuals who recognize the advantages of hybrid learning also tend to acknowledge its challenges, reflecting a balanced and realistic understanding of the hybrid learning environment. Overall, the results highlight the complex nature of hybrid learning, where satisfaction is influenced not only by the benefits experienced but also by institutions' and stakeholders' ability to effectively address existing challenges.

CONCLUSIONS

The study concludes that hybrid learning is widely regarded as a highly beneficial instructional approach by both students and faculty, with institutional support, the availability of learning resources, and the preparedness of instructors and learners emerging as critical factors influencing overall satisfaction. Students, in particular, emphasized the importance of accessible digital learning materials and well-structured academic guidance, which foster autonomous learning and facilitate the development of self-regulatory skills essential for navigating both synchronous and asynchronous components of hybrid education. Faculty satisfaction, in contrast, was closely linked to the adaptability and flexibility of hybrid instructional models, opportunities for pedagogical innovation, and access to institutional resources,

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although technological limitations and intermittent internet connectivity remained persistent concerns that could affect instructional efficiency and the quality of student engagement.

The findings further underscore that hybrid learning embodies a dynamic interplay between benefits and challenges. While both students and faculty recognize the advantages of flexibility, accessibility, and enhanced digital competencies, they also encounter obstacles such as technological constraints, inconsistent connectivity, and reduced opportunities for face-to-face interaction, which may hinder seamless participation and collaborative learning. The positive correlations observed between satisfaction and perceived challenges suggest that awareness of difficulties does not necessarily reduce overall satisfaction; rather, it reflects a nuanced understanding of the operational and cognitive demands inherent in hybrid instructional delivery. This highlights the importance of viewing hybrid learning not merely as a simplified or convenient instructional alternative, but as a complex educational model that requires careful planning, continuous support, and adaptive strategies.

Overall, the study emphasizes that the effectiveness of hybrid learning is contingent upon robust institutional support, reliable technological infrastructure, and comprehensive faculty development initiatives. When these elements are adequately integrated, hybrid learning can enhance student engagement, optimize instructional effectiveness, and ensure continuity of education, even in contexts that may pose logistical or technological challenges. These conclusions underscore the necessity of strategic planning, continuous allocation of resources, and targeted professional development to sustain hybrid learning models that are both effective and resilient within contemporary educational settings. By addressing these components systematically, institutions can maximize the pedagogical potential of hybrid learning while mitigating the operational and technological barriers that may impede its full implementation.

Recommendations

In light of these findings, several recommendations are proposed to strengthen the implementation of hybrid learning.

First, educational institutions should prioritize the systematic upgrading of technological infrastructure and the assurance of reliable internet connectivity. Adequate infrastructure is essential not only for maintaining uninterrupted access to digital learning platforms but also for ensuring equitable participation among all students, including those in remote or underserved areas. Investments may include expanding bandwidth capacity, providing campus-wide Wi-Fi coverage, and offering institutional support for students requiring access to devices such as laptops or tablets. By addressing these technological challenges, institutions can minimize disruptions in synchronous and asynchronous learning activities, thereby fostering a more seamless and inclusive hybrid learning environment.

Second, faculty development programs should be strategically enhanced to equip educators with the skills necessary for effective hybrid instruction. Professional development initiatives should emphasize digital pedagogy, including integrating online tools, multimedia resources, and interactive platforms into instructional design. Faculty should also be trained in methods to sustain student engagement across both face-to-face and virtual modalities, such as active learning strategies, online discussion facilitation, and timely feedback mechanisms. By strengthening faculty competencies, institutions can ensure that hybrid courses are pedagogically sound, technologically integrated, and responsive to students' diverse learning needs.

Third, institutions should provide continuous academic and administrative support that reinforces both student and faculty success within hybrid learning programs. This includes maintaining accessible learning resources, offering clear and consistent communication channels, and providing structured guidance on course expectations, schedules, and assessment procedures. Administrative measures might also include technical support services, online help desks, and orientation programs designed to familiarize students and faculty with hybrid platforms. Such support systems contribute to a well-organized and

predictable learning environment, which has been shown to enhance student satisfaction, reduce cognitive load, and improve overall academic outcomes.

For students, specific strategies should be incorporated to strengthen self-regulation, motivation, and digital literacy. These strategies may involve scaffolding independent learning through structured online tasks, providing tutorials for using digital platforms effectively, and promoting time management and goal-setting techniques. Encouraging student autonomy while offering guidance ensures that learners can navigate the challenges of hybrid learning confidently and responsibly, ultimately enhancing engagement and academic performance.

Policymakers are also encouraged to actively support hybrid learning initiatives through resource allocation, policy formulation, and the establishment of institutional standards. Investments should target technological infrastructure, professional development for faculty, and the development of hybrid learning best practices. Clear guidelines and incentives can help ensure consistency, sustainability, and quality across educational institutions, promoting equitable access to high-quality hybrid instruction nationwide.

Finally, future research should investigate the longitudinal effects of hybrid learning on student outcomes, faculty workload, and institutional efficiency. Such studies could examine variations in engagement, learning achievement, and instructional practices across diverse educational contexts, including public and private institutions, urban and rural settings, and different academic disciplines. Insights gained from longitudinal research can inform continuous improvements in hybrid learning design, helping institutions optimize instructional models, anticipate challenges, and maximize educational benefits for all stakeholders.

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