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Distinguishing Distance and Hybrid Learning: An Investigation of Student Perceptions and Learning Preferences

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Abstract: As flexible learning environments become increasingly common in higher education, understanding how students perceive different learning modes is essential for effective course design. Although hybrid learning has been widely adopted, limited research has examined whether students meaningfully distinguish hybrid learning from distance learning and how these perceptions influence student success. Drawing upon the HyFlex framework, this study investigates the effects of learning mode and experiential learning on learner choice, accessibility, equivalency, and reusability, and examines how these factors relate to student satisfaction and academic self-efficacy.

A scenario-based experiment employing a 2 × 2 factorial design was conducted with 222 university students. Structural equation modeling was used to evaluate the proposed conceptual framework and compare student perceptions across distance and hybrid learning environments.

The results indicate that experiential learning exerted a significant positive influence on learner choice, accessibility, equivalency, and reusability, whereas learning mode did not significantly influence these perceptions in the overall distance-versus-hybrid comparison. Additional analyses suggest that students may perceive hybrid online participation and distance learning as highly similar educational experiences. However, when hybrid in-classroom participation was examined separately, students reported higher levels of satisfaction and more positive learning experiences. Qualitative findings further revealed that interaction and engagement opportunities, rather than flexibility alone, distinguish hybrid learning from distance learning.

This study contributes to the flexible learning literature by demonstrating that students evaluate learning environments primarily through instructional design and opportunities for interaction rather than formal delivery-mode classifications. The findings provide practical guidance for educators and institutions seeking to design more engaging and effective flexible learning environments.

Keywords: Distance Learning; Hybrid Learning; Experiential Learning; Student Perceptions; Student Satisfaction; Academic Self-Efficacy; Higher Education

1. Introduction

Technology-enabled learning environments have transformed higher education by providing students with increased flexibility and access to learning opportunities. Among the various approaches that have emerged, distance learning and hybrid learning have become two of the most widely adopted alternatives to traditional classroom instruction. While both approaches seek to improve access and flexibility, they differ substantially in their design, participation options, and learning experiences.

Distance learning is characterized by fully remote participation in which students access learning materials and complete course activities online without attending physical classrooms. Hybrid learning, in contrast, combines online and in-person participation opportunities, allowing students to engage with course content through multiple modes while maintaining opportunities for real-time interaction and classroom engagement. Proponents of hybrid learning argue that it combines the flexibility of distance education with the social and interactive benefits of classroom instruction.

Despite these conceptual differences, confusion surrounding hybrid learning remains common among both students and educational institutions. In practice, hybrid learning is often interpreted as a form of online learning with additional engagement activities, while some institutions continue to use the terms hybrid, online, and distance learning interchangeably. As a result, students may not fully understand the distinctive characteristics of hybrid learning when making decisions about course enrollment and participation.

This issue has become increasingly important as universities continue to expand flexible learning offerings beyond the pandemic era. Students are now presented with multiple learning options and are expected to choose environments that best align with their learning preferences, personal circumstances, and educational goals. If students perceive hybrid learning as essentially equivalent to distance learning, the unique benefits of hybrid course design may be overlooked or underutilized.

Although prior research has examined the effectiveness of hybrid learning and identified factors associated with student success, relatively little attention has been devoted to understanding how students distinguish hybrid learning from distance learning. Existing studies have primarily focused on learning outcomes, engagement, satisfaction, and technology adoption, while fewer studies have explored students' perceptions of the differences between learning modes and the factors that influence those perceptions.

In addition, experiential learning has emerged as an important instructional approach for promoting active participation, practical application of knowledge, and student engagement. While experiential learning has been associated with positive educational outcomes across various learning environments, its role in shaping students' perceptions of distance and hybrid learning remains underexplored.

To address these gaps, this study examines student perceptions of distance and hybrid learning through the lens of HyFlex course design principles. Specifically, the study investigates how learning mode and experiential learning influence learner choice, accessibility, equivalency, and reusability, and how these factors contribute to student satisfaction and academic self-efficacy. More importantly, the study explores whether students meaningfully distinguish hybrid learning from distance learning and identifies the factors that shape their perceptions of flexible learning environments.

The findings contribute to the growing literature on flexible learning environments by providing insights into how students evaluate distance and hybrid learning experiences. The study also offers practical guidance for educators and institutions seeking to design learning environments that better align with student expectations and preferences.

2. Literature Review

2.1 Distance Learning

Distance learning has long been recognized as an important alternative to traditional classroom instruction (Banas & Emory, 1998; Valentine, 2002; Zakharova et al., 2024). Initially developed to provide educational opportunities for geographically dispersed learners, distance learning has evolved significantly with advances in communication and information technologies (Al-Arimi, 2014). Modern distance learning environments allow students to access course materials, participate in learning activities, and

communicate with instructors through digital platforms regardless of location (Corchado et al., 2023; Sherron & Boettcher, 1997).

One of the primary advantages of distance learning is flexibility (Al-Arimi, 2014; Veletsianos & Houlden, 2019). Students can access educational resources at convenient times and locations, making distance learning particularly attractive for individuals balancing academic, professional, and personal responsibilities. Distance learning also reduces geographical barriers and enables institutions to reach broader student populations (Ersoy, 2023; Gunawardena & Mclsaac, 2013).

Despite these advantages, distance learning presents several challenges. Research has identified reduced interaction, lower levels of engagement, difficulties maintaining motivation, and feelings of isolation as common concerns among distance learners (Galusha, 1998; Gillett-Swan, 2017; Vayre & Vonthron, 2017). Students often rely heavily on self-regulation and independent learning skills to succeed in fully online environments (Sharma et al., 2024). Consequently, student satisfaction and learning outcomes may vary considerably depending on course design and individual learner characteristics.

2.2 Hybrid Learning

Hybrid learning combines online and in-person learning experiences within a single course environment (Lin, 2008). Unlike traditional distance learning, hybrid learning allows students to participate through multiple modes while maintaining opportunities for real-time interaction and classroom engagement (Almusaed et al., 2023; Mulenga & Shilongo, 2025). The approach seeks to combine the flexibility of online learning with the social and instructional benefits of face-to-face education.

The development of HyFlex learning further extended the hybrid concept by providing students with the flexibility to choose how they participate in individual learning sessions. Beatty (2007, 2019) proposed four core principles that guide effective HyFlex course design: learner choice, accessibility, equivalency, and reusability. Learner choice provides students with flexibility in participation, accessibility ensures equitable access to learning resources, equivalency focuses on comparable learning experiences across participation modes, and reusability emphasizes the availability of learning resources for future use (Beatty, 2007, 2019).

Research suggests that hybrid learning can enhance student engagement, satisfaction, and learning flexibility (La Greca & Hanham, 2023; Mahmud et al., 2026). However, successful implementation requires careful instructional design to ensure that students in different participation modes receive comparable learning opportunities and support.

2.3 Distinguishing Distance and Hybrid Learning

Although distance and hybrid learning are conceptually distinct, the differences are not always apparent from a student perspective (Garrison, 2009; Raes, 2021; Raes et al., 2020). Distance learning is typically characterized by fully online participation, asynchronous learning activities, and limited opportunities for real-time interaction. Hybrid learning, in contrast, incorporates both online and in-person participation options and is designed to support interaction across participation modes.

A key distinction lies in the role of participation and interaction (Bergdahl et al., 2022). While distance learning emphasizes flexibility and independent learning, hybrid learning seeks to preserve opportunities for engagement, collaboration, and classroom participation (Garrison, 2009; Raes et al., 2019). Students enrolled in hybrid courses may attend sessions in person, participate online synchronously, or alternate between participation modes depending on course design.

Despite these theoretical differences, limited research has examined whether students actually perceive hybrid learning as distinct from distance learning (Yousry & Azab, 2022). As institutions increasingly expand flexible learning offerings, understanding how students differentiate these learning environments becomes important for both course design and educational decision-making.

2.4 Experiential Learning and Student Success

Experiential learning refers to a process through which students acquire knowledge through direct experience, application, and reflection (Kolb, 1993, 2014). Rooted in Kolb's experiential learning theory, the approach emphasizes learning through active participation rather than passive knowledge acquisition (Kolb,

2014). Examples of experiential learning include projects, simulations, internships, case analyses, field experiences, and other activities that connect theoretical concepts with practical application (Kolb, 2014; McCarthy, 2010; Pole & McGee, 2025).

Experiential learning has been associated with increased engagement, motivation, critical thinking, and knowledge retention (Kolb, 1993, 2014). By providing opportunities to apply concepts in realistic contexts, experiential learning encourages deeper understanding and supports the development of transferable skills (Passarelli & Kolb, 2023).

Within flexible learning environments, experiential learning may also influence how students perceive learner choice, accessibility, equivalency, and reusability (Beatty, 2019). Courses that incorporate experiential learning opportunities may provide richer learning experiences and improve students' overall evaluations of the learning environment. However, limited empirical evidence exists regarding the role of experiential learning in shaping student perceptions of distance and hybrid learning environments (Azeez & Aboobaker, 2024; Kee et al., 2023).

Given the growing importance of flexible learning models, further research is needed to understand how learning mode and experiential learning jointly influence student perceptions and success. This study addresses this gap by examining the relationships among learning mode, experiential learning, HyFlex design principles, student satisfaction, and academic self-efficacy.

3. Conceptual Framework and Hypothesis Development

This study examines student perceptions of distance and hybrid learning environments through the lens of HyFlex course design principles. Although distance and hybrid learning are often discussed as distinct educational approaches, students may not always perceive meaningful differences between them. Understanding how students evaluate these learning environments is important because these perceptions influence their satisfaction, confidence, and future learning preferences.

Drawing upon Beatty's HyFlex framework, this study proposes that student evaluations of learning environments are shaped by two key factors: learning mode and experiential learning. Learning mode refers to whether students participate in a distance or hybrid learning environment. Experiential learning represents the extent to which students engage in practical, application-oriented learning activities that encourage active participation and reflection.

The framework proposes that learning mode and experiential learning influence students' perceptions of four core HyFlex principles: learner choice, accessibility, equivalency, and reusability. These principles subsequently influence student success outcomes, represented by satisfaction and academic self-efficacy. **Figure 1** presents the conceptual framework guiding this study.

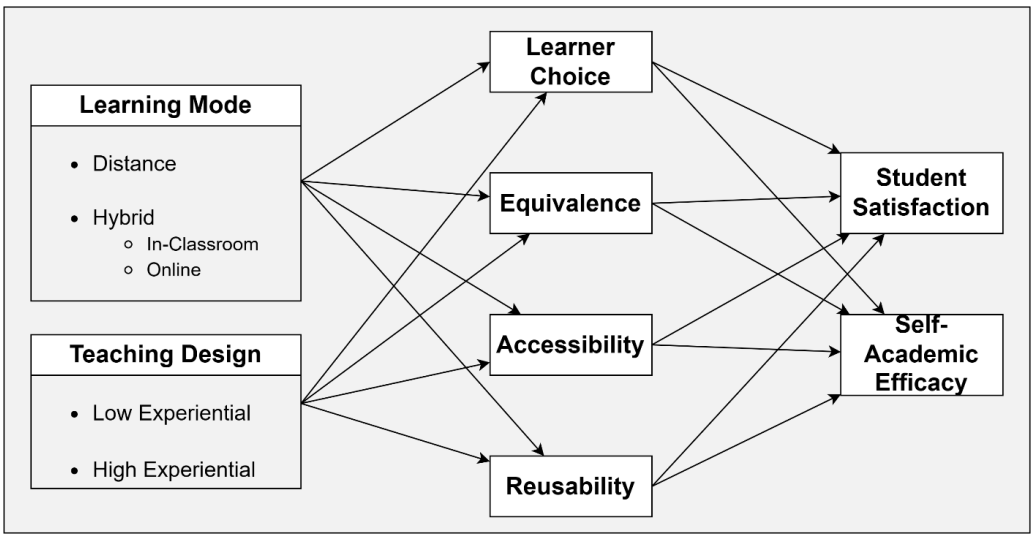

Figure 1. Conceptual Framework for Examining Student Perceptions of Distance and Hybrid Learning

3.1 Learning Mode and HyFlex Principles

Learner choice refers to the flexibility students have in determining how they participate in learning activities. Hybrid learning environments provide students with multiple participation options, including online and in-person attendance. In contrast, distance learning environments are generally limited to online participation. Consequently, students in hybrid environments are expected to perceive greater learner choice.

H1: Learner choice is higher in hybrid learning environments than in distance learning environments.

Equivalency concerns whether students perceive comparable learning opportunities and outcomes regardless of participation mode. Because hybrid learning involves multiple participation formats, maintaining equivalent learning experiences can be challenging. Distance learning, by comparison, places all students within a common learning environment. Therefore, differences in perceived equivalency may emerge between the two learning modes.

H2: Perceived equivalency differs between hybrid and distance learning environments.

Accessibility refers to students' ability to access learning opportunities, resources, and participation options. Hybrid learning environments are designed to provide multiple pathways for participation and engagement. As a result, students may perceive higher levels of accessibility in hybrid learning environments.

H3: Accessibility is higher in hybrid learning environments than in distance learning environments.

Unlike learner choice, accessibility, and equivalency, reusability primarily reflects the extent to which learning resources remain available for repeated access and future use. Because both distance and hybrid learning environments rely heavily on digital learning materials, recorded lectures, and online resources, students are expected to perceive comparable levels of reusability across the two learning modes. Accordingly, no meaningful difference in perceived reusability is expected between distance and hybrid learning environments.

H4: No meaningful difference is expected in perceived reusability between distance and hybrid learning environments.

3.2 Experiential Learning and HyFlex Principles

Experiential learning emphasizes learning through practical application, active participation, and reflection. Research suggests that experiential learning enhances engagement, motivation, and learning effectiveness. Within flexible learning environments, experiential learning may strengthen students' perceptions of learner choice, accessibility, equivalency, and reusability.

Students who engage in experiential learning activities are likely to perceive greater flexibility and control over their learning processes.

H5: Experiential learning positively influences learner choice.

Experiential learning activities often require instructors to provide comparable opportunities for participation and engagement across learning environments.

H6: Experiential learning positively influences perceived equivalency.

Experiential learning encourages the use of diverse learning resources and participation opportunities, potentially increasing students' perceptions of accessibility.

H7: Experiential learning positively influences perceived accessibility.

Experiential learning activities frequently generate learning materials and experiences that can be revisited and reused by students.

H8: Experiential learning positively influences perceived reusability.

3.3 HyFlex Principles and Student Success

Student success in this study is represented by satisfaction and academic self-efficacy. Satisfaction reflects students' overall evaluation of their learning experiences, while academic self-efficacy refers to students' confidence in their ability to successfully complete academic tasks and achieve learning goals.

The HyFlex framework suggests that learning environments characterized by greater learner choice, accessibility, equivalency, and reusability should contribute positively to student outcomes. Students who perceive higher levels of these principles are expected to report greater satisfaction and confidence in their academic abilities.

H9: Learner choice positively influences student satisfaction.

H10: Equivalency positively influences student satisfaction.

H11: Accessibility positively influences student

satisfaction.

H12: Reusability positively influences student satisfaction.

H13: Learner choice positively influences academic self-efficacy.

H14: Equivalency positively influences academic self-efficacy.

H15: Accessibility positively influences academic self-efficacy.

H16: Reusability positively influences academic self-efficacy.

4. Methodology

4.1 Research Design

This study adopted a quantitative, scenario-based experimental design to investigate how students perceive distance and hybrid learning environments. Specifically, the study examined whether learning mode and experiential learning influence students' perceptions of the four HyFlex design principles—learner choice, accessibility, equivalency, and reusability—and how these perceptions relate to student satisfaction and academic self-efficacy.

A 2 × 2 factorial experimental design was employed, with learning mode (distance learning versus hybrid learning) and experiential learning (low versus high) serving as the independent variables. Participants were randomly assigned to one of four learning scenarios that described a university course with varying instructional approaches and participation formats. After reviewing their assigned scenario, participants completed a questionnaire evaluating the proposed learning environment.

The experimental design enabled the simultaneous examination of the effects of learning mode and experiential learning while providing a controlled basis for comparing students' perceptions across different flexible learning environments.

4.2 Participants and Data Collection

The study received ethical approval from the Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University of Newfoundland before data collection commenced. Participation was voluntary, anonymous, and based on informed consent.

Data were collected using an online survey administered to university students. Participants were randomly assigned to one of the four experimental scenarios before completing the questionnaire. Initially, 1,127 responses were received. The dataset was subjected to a multi-stage data quality screening procedure before analysis. Responses were excluded if they were incomplete, duplicated, exhibited straight-lining (identical responses across items), or demonstrated internally inconsistent response patterns within the same construct. In addition, completion time and open-ended responses were reviewed to identify careless or low-quality submissions. These procedures were implemented to improve the reliability of the dataset by retaining only responses that reflected thoughtful and internally consistent evaluations. Following the screening process, 222 valid responses remained for analysis.

Although the screening process substantially reduced the sample size, the final sample exceeded commonly recommended minimum sample sizes for covariance-based structural equation modeling and was considered adequate for testing the proposed model.

4.3 Experimental Conditions

The study employed a 2 × 2 factorial design consisting of two learning mode conditions and two experiential learning conditions.

The learning mode factor compared:

1. Distance Learning
2. Hybrid Learning

The experiential learning factor compared:

1. Low Experiential Learning
2. High Experiential Learning

Participants were randomly assigned to one of four experimental scenarios:

- Distance Learning with Low Experiential Learning
- Distance Learning with High Experiential Learning
- Hybrid Learning with Low Experiential Learning
- Hybrid Learning with High Experiential Learning

Each scenario described a realistic university course environment and outlined the course structure, learning activities, participation options, and instructional approaches associated with the assigned condition.

Because preliminary analyses indicated unexpected similarities between distance and hybrid learning, additional analyses were subsequently conducted to separately examine hybrid online participation and hybrid in-classroom participation.

4.4 Measures

Seven latent constructs were included in the study: experiential learning, learner choice, accessibility, equivalency, reusability, student satisfaction, and academic self-efficacy. Learning mode was manipulated experimentally rather than measured as a latent construct.

Experiential learning was measured using five items assessing the extent to which students perceived opportunities for practical application, active participation, and learning through experience.

Learner choice assessed students' perceptions of flexibility and control over how they participate in learning activities.

Accessibility measured the extent to which students perceived learning opportunities and resources to be available and accessible.

Equivalency assessed students' perceptions of whether comparable learning opportunities and outcomes were available regardless of participation mode.

Reusability measured students' perceptions regarding the availability and future usefulness of learning resources and materials.

Student satisfaction captured participants' overall evaluation of their learning experience.

Academic self-efficacy measured students' confidence in their ability to successfully complete academic tasks and achieve desired learning outcomes.

All measurement items were assessed using ten-point Likert-type scales ranging from 1 (strongly disagree) to 10 (strongly agree).

4.5 Data Analysis

The proposed research model was evaluated using covariance-based Structural Equation Modeling (SEM) in AMOS. SEM was selected because it enables the simultaneous assessment of measurement quality and the structural relationships among multiple latent constructs.

The analysis was conducted in two stages. First, Confirmatory Factor Analysis (CFA) was performed to evaluate the reliability and validity of the measurement model. Reliability was assessed using composite reliability (CR), while convergent validity was examined using standardized factor loadings and average variance extracted (AVE).

Second, the structural model was estimated to test the proposed hypotheses linking learning mode, experiential learning, HyFlex design principles, student satisfaction, and academic self-efficacy. Model adequacy was evaluated using multiple goodness-of-fit indices, including the chi-square to degrees-of-freedom ratio (χ^2/df), root mean square error of approximation (RMSEA), comparative fit index (CFI), and incremental fit index (IFI).

Because the initial structural model revealed few differences between distance and hybrid learning, an additional analysis was conducted to compare distance learning with hybrid in-classroom participation. This supplementary analysis provided further insight into how students differentiate various forms of flexible learning environments.

5. Results

5.1 Measurement Model Assessment

Prior to evaluating the structural relationships, Confirmatory Factor Analysis (CFA) was conducted to assess the reliability and validity of the measurement model. Convergent validity was evaluated using factor loadings, composite reliability (CR), and average variance extracted (AVE).

As shown in **Table 1**, all retained measurement items exceeded the recommended factor loading threshold of 0.70. Composite reliability values ranged from 0.905 to 0.934, exceeding the recommended minimum value of 0.70. Average variance extracted values ranged from 0.657 to 0.740, surpassing the recommended threshold of 0.50. Collectively, these findings demonstrate satisfactory reliability and convergent validity for all constructs included in the study.

Table 1. Measurement Model Results

Factor	Items	Factor Loadings	CR	AVE
Experiential Learning	EL1	0.809	0.905	0.657
	EL2	0.790		
	EL3	0.840		

Continuation Table:

Factor	Items	Factor Loadings	CR	AVE
	EL4	0.763		
	EL5	0.849		
Learners Choice	L1	0.849	0.934	0.740
	L2	0.838		
	L3	0.860		
	L4	0.880		
	L5	0.874		
Equivalency	Eq1	0.859	0.909	0.715
	Eq2	0.883		
	Eq3	0.849		
	Eq4	0.788		
Accessibility	A1	0.836	0.909	0.667
	A2	0.813		
	A3	0.811		
	A4	0.877		
	A5	0.739		
Reusability	R1	0.814	0.908	0.713
	R2	0.855		
	R3	0.855		
	R4	0.852		
Satisfaction	S1	0.835	0.910	0.669
	S2	0.781		
	S3	0.800		
	S4	0.826		
	S6	0.846		
Academic Self-Efficacy	SE1	0.777	0.912	0.674
	SE2	0.828		
	SE3	0.837		
	SE4	0.855		
	SE5	0.807		

The results support the adequacy of the measurement model and justify proceeding with structural model evaluation.

5.2 Distance versus Hybrid Learning

The proposed conceptual framework was first evaluated using the full sample comparing distance and hybrid learning environments. Model fit was assessed using multiple fit indices. The structural model demonstrated acceptable overall fit to the data ($\chi^2/df = 2.757$, RMSEA = .089, IFI = .869, CFI = .868). Although the RMSEA value was slightly above the commonly recommended threshold of .08, the remaining fit indices indicated acceptable model fit and supported proceeding with interpretation of the structural relationships. Given the complexity of the proposed model and the exploratory comparison of learning environments, the overall model fit was considered satisfactory.

Table 2 presents the structural model results. Experiential learning demonstrated consistently strong positive relationships with learner choice (Estimate = .650), accessibility (Estimate = .718), equivalency (Estimate = .734), and reusability (Estimate = .736), indicating that instructional design exerted substantial effects on students' perceptions of the learning environment. In contrast, learning mode exhibited negligible and statistically insignificant effects across all four HyFlex principles. These findings suggest that

students' evaluations of flexible learning environments are influenced far more by the quality of instructional design than by whether a course is delivered through distance or hybrid learning.

Table 2. Structural Model Results

	Path		Estimate	S.E.	C.R.	P
ExperientialLearning	→	LearnerChoice	.650	.066	9.826	***
ExperientialLearning	→	Equivalency	.734	.073	10.068	***
ExperientialLearning	→	Accessibility	.718	.065	10.958	***
LearningMode	→	LearnerChoice	-.194	.170	-1.146	.252
LearningMode	→	Accessibility	-.146	.165	-.887	.375
LearningMode	→	Equivalency	-.155	.200	-.778	.436
LearningMode	→	Reusability	-.099	.186	-.534	.593
ExperientialLearning	→	Reusability	.736	.071	10.370	***
LearnerChoice	→	Satisfaction	13.929	36.958	.377	.706
LearnerChoice	→	Self-Efficacy	20.873	54.642	.382	.702
Equivalency	→	Satisfaction	-2.775	7.588	-.366	.715
Equivalency	→	Self-Efficacy	-3.873	11.218	-.345	.730
Accessibility	→	Satisfaction	-29.593	79.905	-.370	.711
Accessibility	→	Self-Efficacy	-44.250	118.139	-.375	.708
Reusability	→	Satisfaction	20.388	52.957	.385	.700
Reusability	→	Self-Efficacy	29.489	78.296	.377	.706

These results suggest that experiential learning exerted a substantially stronger influence on student perceptions than learning mode itself. Experiential learning demonstrated significant positive relationships with learner choice, accessibility, equivalency, and reusability, whereas learning mode did not significantly influence any of the four HyFlex principles. Furthermore, none of the relationships between the HyFlex principles and student outcomes achieved statistical significance in the overall distance-versus-hybrid comparison. Collectively, these findings suggest that students may evaluate flexible learning environments more strongly based on instructional design characteristics than on delivery mode alone. These findings were somewhat unexpected given the theoretical distinctions between distance and hybrid learning environments. Although hybrid learning is designed to provide greater participation flexibility and interaction opportunities, students did not appear to perceive substantial differences between the two learning modes. This observation prompted additional analyses to better understand how students conceptualize hybrid learning.

5.3 Understanding the Similarity Between Distance and Hybrid Learning

The initial results suggested that students may not clearly distinguish hybrid learning from distance learning. Closer examination of the hybrid condition revealed that students could participate either online or in the classroom. From a student perspective, hybrid online participation shares many characteristics with distance learning, including remote attendance, technology-mediated communication, and digital access to learning materials.

As a result, students participating online in hybrid courses may perceive their learning experiences as highly similar to those experienced in distance learning environments. This interpretation helps explain the lack of significant learning mode effects observed in the initial model and suggests that the distinction between distance and hybrid learning may be less apparent than commonly assumed.

To further investigate this issue, additional analyses were conducted to separately examine hybrid in-classroom participation.

5.4 Distance versus Hybrid In-Classroom Learning

The hybrid in-classroom comparison also demonstrated

acceptable model fit (χ^2/df = 2.335, RMSEA = .095, IFI = .840, CFI = .838). Although the RMSEA value exceeded the conventional .08 guideline, the remaining fit indices indicated an acceptable level of model fit. Therefore, the model was considered adequate for evaluating the proposed structural relationships. When hybrid in-classroom participants were examined separately, more meaningful differences emerged. Experiential learning continued to demonstrate strong positive effects on learner choice, accessibility, equivalency, and reusability. More importantly, students participating in hybrid in-classroom environments reported higher levels of satisfaction than students in distance learning environments. **Table 3** presents the results for Hybrid in-classroom and distance learning environments.

The findings suggest that the distinguishing characteristic of hybrid learning may not be flexibility alone, but rather the opportunity for direct interaction and classroom engagement. While hybrid online participation resembles distance learning from a student perspective, hybrid in-classroom participation provides a learning experience that students perceive differently.

These findings indicate that the value of hybrid learning may be most evident when students actively utilize its classroom participation opportunities rather than engaging exclusively through online participation.

Table 3. Distance versus Hybrid In-Classroom Results

Path			Estimate	S.E.	C.R.	P
ExperientialLearning	→	LearnerChoice	.466	.069	6.738	***
ExperientialLearning	→	Equivalency	.644	.079	8.128	***
ExperientialLearning	→	Accessibility	.663	.075	8.802	***
ExperientialLearning	→	Reusability	.613	.075	8.221	***
LearningMode	→	LearnerChoice	-.032	.182	-.177	.860
LearningMode	→	Equivalency	-.052	.212	-.246	.806
LearningMode	→	Accessibility	-.155	.220	-.706	.480
LearningMode	→	Reusability	.066	.199	.330	.741
LearnerChoice	→	Satisfaction	1.664	.706	2.357	.018
LearnerChoice	→	Self-Efficacy	2.255	.870	2.591	.010
Equivalency	→	Satisfaction	-1.076	.507	-2.123	.034
Equivalency	→	Self-Efficacy	-1.064	.615	-1.730	.084
Accessibility	→	Satisfaction	-2.709	1.222	-2.216	.027
Accessibility	→	Self-Efficacy	-3.774	1.502	-2.512	.012
Reusability	→	Satisfaction	3.934	1.356	2.901	.004
Reusability	→	Self-Efficacy	4.611	1.658	2.782	.005

5.5 Student Motivators and Demotivators

To complement the quantitative findings, participants were asked to identify the primary advantages and disadvantages of distance and hybrid learning environments.

Table 4 summarizes the most frequently reported motivators associated with each learning mode. Students identified flexibility, self-paced learning, and freedom from location constraints as the primary advantages of distance learning. For hybrid learning, students emphasized flexibility, participation options, interaction opportunities, and access to both online and in-person learning experiences.

Table 4. Student Motivators for Distance and Hybrid Learning

Distance	Hybrid
Easy registration	Flexibility/Ability to choose
Study my own time	Supports financially
Fits my schedule	Learning freedom

Continuation Table:

Distance	Hybrid
No venue restriction	Learn More/ More Opportunities
No fixed class time	Work better on own schedule
	Able to work while studying
	Study at own time
	All resources are accessible
	Able to learn in both online and in-person
	Able to learn regardless of personal health/mental issues
	Recorded lectures can be viewed anytime

Table 5 presents the most frequently reported disadvantages. Distance learning was commonly associated with reduced motivation, limited interaction, and difficulties obtaining assistance from instructors. Hybrid learning generated fewer concerns overall, although some students identified challenges related to course organization and balancing the needs of online and classroom participants.

Table 5. Student Demotivators for Distance and Hybrid Learning

Distance	Hybrid
No motivation	Less enthusiasm of teachers
Lack of structure	Need more structure
Difficult to learn effectively	More freedom but can't achieve all learning goals
Makes me lazy	Need more experience
Prefer interactions	Less interactions
Subject to internet restrictions	Difficult to adjust to
Lack of self-control	Get distracted due to other students attending via online
Difficult understanding concepts	Too messy
Not efficient	
Difficult to engage or clear doubts with professor	
No sort of interactions	

The qualitative findings provide additional support for the quantitative results by suggesting that interaction and engagement opportunities are central to how students distinguish hybrid learning from distance learning.

5.6 Future Learning Preferences

Participants were also asked about their future learning preferences. The results indicated a clear preference for hybrid learning over distance learning. Students frequently cited flexibility, interaction opportunities, and the ability to choose between online and in-person participation as reasons for preferring hybrid learning environments.

In contrast, relatively few students expressed a preference for fully distance learning environments. While students appreciated the flexibility associated with distance learning, many also reported concerns regarding motivation, engagement, and interaction.

Taken together, the findings suggest that students value flexibility in both learning environments. However, interaction opportunities and participation options appear to be the characteristics that most clearly differentiate hybrid learning from distance learning and contribute to students' future learning preferences.

6. Discussion

This study examined student perceptions of distance and hybrid learning environments through the lens of HyFlex course design principles. While prior research has primarily focused on evaluating the effectiveness of hybrid learning environments, the findings of this study provide insights into how students perceive and differentiate distance and hybrid learning and identify the factors that contribute to student success and future

learning preferences.

The first notable finding is the strong and consistent influence of experiential learning on learner choice, accessibility, equivalency, and reusability. Across all analyses, experiential learning consistently exerted the strongest effects in the structural model, with standardized coefficients ranging from .650 to .736. These large effect sizes suggest that instructional design plays a substantially greater role than learning mode in shaping students' perceptions of flexible learning environments. From a practical perspective, the findings indicate that simply offering students different participation modes is unlikely to improve their learning experience unless courses are intentionally designed to incorporate meaningful experiential learning activities. For instructors and institutions implementing flexible learning, emphasis should therefore be placed on designing engaging, application-oriented learning experiences rather than relying solely on the delivery mode itself. This finding is consistent with experiential learning theory, which argues that active participation and practical application enhance student engagement and learning experiences. More importantly, the results suggest that how a course is designed may be more influential than the learning mode itself. Students appear to evaluate learning environments based not only on whether a course is delivered online or in a hybrid format, but also on the quality and meaningfulness of the learning activities provided.

A second and more unexpected finding concerns students' perceptions of distance and hybrid learning. Contrary to expectations, the initial comparison between distance and hybrid learning produced relatively few significant differences. Learning mode did not significantly influence learner choice, accessibility, equivalency, or reusability. This finding suggests that students may not clearly distinguish hybrid learning from distance learning despite the theoretical differences between the two approaches.

Additional analyses provide a possible explanation for this result. Many students participating in hybrid courses engage primarily through the online component rather than through classroom attendance. From their perspective, hybrid online participation closely resembles distance learning because both rely on technology-mediated communication, remote access to learning resources, and online participation. As a result, students may perceive hybrid online learning and fully distance learning as highly similar educational experiences, which may help explain why previous studies have reported inconsistent differences between distance and hybrid learning environments. This finding contributes to the flexible learning literature by highlighting a gap between the theoretical design of hybrid learning and students' lived experiences of those environments.

The comparison between distance learning and hybrid in-classroom participation further supports this interpretation. When hybrid in-classroom participants were examined separately, clearer differences emerged and students reported higher levels of satisfaction than those in distance learning environments. This finding suggests that the distinguishing characteristic of hybrid learning is not flexibility alone, since both learning modes provide flexible access to educational resources. Rather, hybrid learning appears to derive its unique value from opportunities for interaction, engagement, and classroom participation. Students who experience these elements directly are more likely to perceive hybrid learning as distinct from distance learning.

An additional finding emerged from the hybrid in-classroom analysis. Contrary to expectations, accessibility and equivalency exhibited negative relationships with several student outcomes. Accessibility was negatively associated with both satisfaction and academic self-efficacy, while equivalency demonstrated a negative relationship with satisfaction and a marginally negative relationship with academic self-efficacy. Although HyFlex theory conceptualizes accessibility and equivalency as desirable characteristics of flexible course design, the findings suggest that their implementation may involve important trade-offs. Increased accessibility often relies on asynchronous resources, remote participation, and flexible access to learning materials. While these features reduce logistical barriers, they may also reduce opportunities for interaction, immediate feedback, and active engagement. Similarly, efforts to provide equivalent learning opportunities across participation modes may require standardized instructional approaches that cannot fully replicate the richness and spontaneity of face-to-face interaction. Consequently, students may recognize that learning opportunities are

accessible and comparable across participation modes while still reporting lower satisfaction or confidence in their learning experience. These findings suggest that accessibility and equivalency alone are insufficient to enhance student outcomes and are likely to be most effective when combined with meaningful experiential learning activities that actively engage students regardless of participation mode.

The qualitative findings reinforce this conclusion. Students identified flexibility as an important advantage of both distance and hybrid learning. However, participants associated hybrid learning with additional benefits such as interaction, participation opportunities, and the ability to move between online and classroom learning environments. In contrast, distance learning was frequently associated with reduced motivation, limited engagement, and difficulties interacting with instructors and peers. These findings suggest that interaction remains a critical component of successful learning environments even when students value flexibility and convenience.

The results also provide insights into students' future learning preferences. Although participants appreciated the flexibility offered by distance learning, most expressed a preference for hybrid learning in future educational experiences. Students valued the ability to choose how they participate while maintaining access to classroom interactions when desired. This finding suggests that students increasingly seek learning environments that balance flexibility with opportunities for engagement and social interaction. For institutions expanding flexible learning options, hybrid learning may therefore represent a more attractive long-term strategy than fully distance learning environments.

This study contributes to the literature in several ways. First, it extends existing research by examining how students perceive and differentiate distance and hybrid learning rather than focusing solely on learning outcomes. Second, it demonstrates the importance of experiential learning in shaping perceptions of learner choice, accessibility, equivalency, and reusability. Third, it provides empirical evidence that students may perceive hybrid online participation and distance learning as similar experiences, helping explain why learning mode alone may not always produce meaningful differences in student outcomes. Fourth, the findings highlight the importance of interaction and classroom engagement in defining the unique value of hybrid learning environments. Finally, this study also contributes to HyFlex research by suggesting that students evaluate learning environments based on experienced interaction opportunities rather than formal delivery-mode classifications. From a student perspective, the distinction between hybrid and distance learning may become meaningful only when opportunities for classroom participation and interaction are actively utilized.

7. Conclusion

As flexible learning environments continue to expand in higher education, understanding how students perceive and evaluate different learning modes has become increasingly important. This study examined student perceptions of distance and hybrid learning through the lens of HyFlex course design principles and explored the role of experiential learning in shaping student success outcomes.

The findings indicate that experiential learning plays a critical role in influencing learner choice, accessibility, equivalency, and reusability. Across all analyses, experiential learning consistently strengthened students' perceptions of the learning environment, suggesting that instructional design may be more important than learning mode alone in shaping educational experiences. These results reinforce the importance of active and application-oriented learning activities in flexible learning environments.

A key contribution of this study is the finding that students may perceive hybrid online participation and distance learning as similar educational experiences. Despite the theoretical distinctions between distance and hybrid learning, students did not consistently differentiate the two learning modes when participation occurred primarily online. However, when hybrid in-classroom participation was examined separately, students reported higher levels of satisfaction and more positive learning experiences. These findings suggest that interaction and classroom engagement, rather than flexibility alone, represent the characteristics that most clearly distinguish hybrid learning from distance learning.

The study also provides practical insights for educators and institutions designing flexible learning environments. While flexibility remains an important

consideration for students, the findings indicate that opportunities for interaction, participation, and engagement continue to play a central role in shaping student perceptions and preferences. Institutions seeking to expand hybrid learning offerings should therefore focus not only on providing flexible participation options but also on creating meaningful opportunities for interaction across participation modes. Similarly, instructors should consider incorporating experiential learning activities that actively engage students regardless of how they choose to participate.

This study contributes to the literature by extending current understanding of distance and hybrid learning beyond traditional measures of effectiveness and student success. Rather than focusing solely on learning outcomes, the findings highlight the importance of examining how students perceive and differentiate learning environments. The results also help explain why previous studies have sometimes reported inconsistent differences between distance and hybrid learning by demonstrating that students may not always recognize hybrid online participation as distinct from distance learning.

Several limitations should be considered when interpreting the findings. First, this study employed a scenario-based experimental design in which participants evaluated hypothetical learning environments rather than actual classroom experiences. Although scenario-based experiments provide a controlled approach for examining perceptions, students' evaluations may differ after prolonged participation in real distance or hybrid courses. Future research could replicate the study using students enrolled in actual flexible learning environments to determine whether similar perception patterns emerge over time.

Second, the study was conducted using participants from a single university, which may limit the generalizability of the findings. Institutional policies, technological infrastructure, instructional practices, and student characteristics may influence how learners perceive flexible learning environments. Future studies involving multiple institutions, disciplines, and cultural contexts would help determine the extent to which these findings can be generalized across higher education settings.

Third, this study focused primarily on students' perceptions of learning environments. Other factors, such as prior online learning experience, digital literacy, learning preferences, personality traits, and self-regulated learning skills, may also influence how students distinguish distance and hybrid learning. Incorporating these variables into future research may provide a more comprehensive understanding of students' evaluations of flexible learning environments.

Fourth, the findings suggest that students may perceive hybrid online participation and distance learning as highly similar educational experiences. However, the present study was not designed to directly investigate the specific mechanisms underlying this perception. Future research could examine how instructional practices, classroom interaction, communication technologies, social presence, and collaborative learning activities contribute to students' ability to differentiate hybrid and distance learning. Longitudinal and mixed-methods studies may also provide deeper insights into how these perceptions evolve as students gain greater experience with flexible learning models.

Finally, the relationships observed in this study may be influenced by institutional and contextual factors, including technological infrastructure, institutional support for flexible learning, class size, disciplinary differences, and instructors' experience with hybrid teaching. These factors may strengthen or weaken the relationships among experiential learning, HyFlex principles, and student outcomes. Future studies should replicate the proposed model across different institutions, educational contexts, and cultural settings to examine the robustness and generalizability of the findings.

Overall, the findings suggest that the unique value of hybrid learning lies not merely in offering flexible participation options, but in providing meaningful opportunities for interaction and engagement that complement the flexibility valued by students. As higher education institutions continue to expand flexible learning offerings, understanding how students perceive and experience these environments will remain essential for designing effective and sustainable learning models.

8. References

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