

TLIC PAPER

Overview of Preliminary Study Findings: Evaluating the Efficacy of the Comprehensive Institutional Model in a Post-COVID-19 HyFlex Higher Education Setting

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ABSTRACT

This paper provides an overview of the preliminary findings for a study that is a continuation of a pilot study conducted during the COVID-19 pandemic. These findings contribute to a broader dissertation study, which evaluates the effectiveness of the Comprehensive Institutional Model (CIM) in the post-COVID-19 HyFlex environment. Initially developed to assist Higher Education Institutions (HEIs) in navigating the challenges of Blended Learning (BL) during the pandemic, the CIM remains relevant as institutions transition into the post-pandemic era. The preliminary results highlight how the CIM's stakeholder-focused educational strategies can improve teaching effectiveness, drive investment in robust instructional technologies, enhance graduate student support services, and ensure institutional sustainability. The dissertation study further explores the impact of the CIM's cyclical communication loops in promoting ongoing dialogue among administrators, faculty, and graduate students at a private university in South Central Texas. Four key themes emerged to inform the broader dissertation research by analyzing post-COVID-19 data collected from personal interviews, HyFlex classroom observations, course design audits, institutional metadata, and researcher reflections.

KEYWORDS

Blended Learning (BL), Comprehensive Institutional Model (CIM), Design-Based Research (DBR), Higher Education Institutions (HEI), HyFlex Models

1 INTRODUCTION

This instrumental case study is a continuing pilot study that explores the efficacy of the CIM, a conceptual framework developed to assist HEIs in addressing the challenges posed by the COVID-19 pandemic within Blended Learning (BL) HyFlex environments [9], [10], [17]. The CIM was constructed from over two years

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(2021–2023) of longitudinal pilot study data and offers detailed recommendations aimed at improving teaching effectiveness, encouraging investments in reliable instructional technology and operational infrastructure, delivering graduate student academic support functions, and executing institutional sustainability actions across three institutional stakeholder groups: administrators, faculty, and graduate students. Therefore, this study is a continuation of the pilot case study (IRB approval reference number 21-09-003), and the data will be incorporated into dissertation research (IRB approval reference number 2024-1552-EXP-v3.6710).

1.1 Study background

The researcher asked four primary research questions aligned with the CIM's stakeholder-focused framework and communication loops to explore the efficacy of the CIM. The study's post-COVID-19 data was collected from various sources, including personal interviews, classroom observations, course design audits, institutional metadata, and researcher reflections. The same primary research questions were asked of all twenty-two stakeholder respondents. Seventeen personal interviews were conducted: four with administrators (A), three with faculty (F), and ten with graduate students (GS). A focus group (FG) comprised of five graduate students, was also completed. While graduate student responses heavily influenced the findings, the emerging themes also reflect input from administrators and faculty.

- a) PRQ1: What are the perceptions and experiences of administrators, faculty, and graduate students of the blended learning factors that impact faculty readiness, acceptance, and adaptability in a HyFlex environment post-COVID era?
- b) PRQ2: What are the perceptions and experiences of administrators, faculty, and graduate students on the best practices for effectively delivering course content and promoting graduate student engagement within a HyFlex learning environment?
- c) PRQ3: How are adult learners' unique challenges and diverse needs to support and balance academic requirements with work/life responsibilities recognized by administrators and faculty in a HyFlex teaching and learning environment?
- d) PRQ4: What are the perceptions and experiences of administrators, faculty, and graduate students on how the institution embraces innovation to address shifts in the educational landscape and to set clear expectations for participating in a HyFlex environment?

1.2 Study linkages: The CIM, research questions, categories, themes

The research questions examined if and how the CIM enhanced faculty readiness, encouraged investments in instructional technology and training, supported graduate student academic needs, and addressed institutional sustainability expectations [9], [10]. Study participant feedback on the model's cyclical communication loops, facilitating iterative feedback on the CIM's focused educational interventions for BL HyFlex adoption amongst the stakeholders, was also collected as part of the dialogue. The data for this continuing study was collected in the post-COVID environment from March through June of 2024. The researcher anonymized the interview transcripts; pseudonyms were used to protect the participants'

identities, and identifiable fields were deleted. Design-Based Research (DBR) was used to gather and iteratively analyze stakeholder interview data to assess the impact of the CIM's stakeholder-focused educational interventions on BL HyFlex adoption [1], [5], [14].

The study's four emerging themes provide a deeper understanding of the phenomenon and comprise eleven supporting categories. The supporting categories were developed based on an intensive four-month iterative analysis and synthesis process of the post-COVID-19 study data [16]. The supporting categories were inductively generated, with new data being constantly compared as it was collected and analyzed [8], [11], [16]. Generative Artificial Intelligence (AI) was used as a triangulation tool to validate the researcher's emerging categories and provide additional insights across the data sets. A substantive category-building approach incorporated the researcher's understanding and meaning of the participants' words. The study findings link the critical elements of the CIM-focused intervention areas, the associated research questions, and the emerging themes and supporting categories.

2 EMERGING STUDY THEMES

2.1 Emerging theme 1: HyFlex faculty readiness

Graduate students define faculty readiness in a HyFlex environment as an instructor's technical competency, experience, and ability to manage in-person and remote students. They expect faculty to be thoroughly trained and prepared to teach in-person and online students simultaneously. The graduate student study participants contend that faculty also need adequate time to break and build new habits, essential for HyFlex adoption and teaching preparation.

Robert, a graduate student (GS1), explained: *“Faculty should have a working knowledge of technology, be confident in using it, and be capable of troubleshooting and finding workarounds when problems arise. Faculty need to be proficient with the LMS used by the institution, whether its Blackboard, Canvas, or Teams.”*

Therefore, the successful implementation of HyFlex teaching methods and pedagogy demands comprehensive and ongoing training and consistent institution-wide efforts to ensure uniformity and minimize student confusion. Institutions should prioritize upskilling and investments in professional development to keep faculty updated on instructional technology and HyFlex's best teaching practices.

Graduate students expect faculty to demonstrate technological proficiency, including digital instructional tools like Padlet and Jamboard and the Learning Management System (LMS), to organize course materials. Administrator responses echo that faculty must be competent in teaching capabilities in the various modalities. Therefore, faculty must effectively manage classroom activities across modalities, promote student engagement, and troubleshoot issues to maintain the class flow [15].

Katrina, an administrator (A1), stated: *“To make that modality work [HyFlex], you really need to be able to seamlessly go from online to in-person and be comfortable with the technology and teaching methods.”*

Clear and consistent communication is vital to the graduate student participants. They expect faculty to provide detailed course expectations and make the syllabus

and course materials available before classes begin. Graduate students want to understand participation expectations, assignment due dates, grading policies, and usage guidelines for using emerging technology, such as AI, in their assignment deliverables. Additionally, they contend that the institution should enhance communication about degree plans, course rotations, and exam requirements to support students throughout their academic journey.

Michelle Lee, a graduate student (GS2), stressed: “... *the importance of faculty having their syllabus and course materials loaded and available to students before the class starts helps students prepare better... Everyone [faculty and students] involved should understand what is expected of them when using HyFlex tools.*”

2.2 Emerging theme 2: Inclusion and engagement

It is essential to make graduate students consistently feel included, valued, and actively engaged in class discussions and activities [3], [6], [12]. Graduate student participants also expect equity in learning and a similar learning experience regardless of their attendance modality. They voiced that the success of HyFlex hinges on faculty expertise in engaging both online and in-person students simultaneously, which requires seamless transitions between instructional modes to create an equitable and similar learning experience. Online students should not feel they missed out because they are remote; conversely, in-person students should not feel like online students have less accountability because some choose to keep their cameras off during class.

Timothy, a graduate student (GS3), posited: “*Faculty must develop the ability to engage both online and in-person students simultaneously, ensuring all students feel included and supported. A balanced approach to engaging both online and in-person students enhances the overall learning experience and helps promote a feeling of community.*”

Graduate students indicated that the HyFlex learning model can promote inclusion and engagement through flexibility and accessibility choices. This model allows them to manage their studies, personal commitments, and work responsibilities through flexible attendance options: it is particularly beneficial for graduate students working or caring for children [13]. “*Myriah, a graduate student (GS4), shared, ‘Flexibility in attendance options is highly valued by students, particularly adult learners who may have varying schedules and commitments.’*” HyFlex enables meaningful collaborations among students and professionals from different locations, enriching the learning experience. Therefore, institutions must support HyFlex by investing in necessary technologies, clearly communicating its benefits as a quality educational choice, and ensuring the appropriate policies and resources are in place to support its implementation for equitable learning opportunities for graduate students [17].

According to the graduate student responses, some course formats, such as traditional lectures or theory discussions, may better suit the HyFlex environment. Conversely, courses requiring heavy computational or database skills may need more hands-on, in-person assistance from the instructor. Therefore, the instructor has to balance their teaching style and the course content to address the different modalities [3], [12]. Graduate students voiced that faculty attitudes and teaching

approaches also influence student engagement and perceptions of receiving an equitable and similar educational experience. They contend that a positive attitude can enhance technology adoption and usage and that faculty with more skills and experience in using technology tend to have more positive attitudes and be more effective in a HyFlex environment.

Susanna, a Graduate Student (GS4), shared: *“Positive faculty attitudes toward instructional technology and HyFlex models lead to better student experiences, while negative attitudes can hinder learning. Faculty members’ attitudes towards technology and HyFlex significantly impact their effectiveness and relationships with students.”*

The study also highlighted that graduate students must proactively engage with faculty to build their doctoral scholarship and professional skills, particularly for research and publishing opportunities. This engagement is driven by student self-efficacy, requiring open communication of educational needs and priorities with their advisors and instructors. Administrators voiced that faculty should invite students into their research and academic projects, thus creating a supportive environment that encourages self-directed learning and student responsibility for learning outcomes.

Dr. Smith, an administrator (A2), expressed his view: *“Faculty should invite students into their work where that’s possible, or at least you know, utilize them to help them with their own research, and in doing so, students can, through an integrated experience, learn how to do it.”*

Courses should connect academic content to real-life experiences, making them more relevant and engaging for graduate students. Faculty agreed they should help students apply their knowledge and develop research skills to use in real-world contexts for academic success and professional work. “Dr. Caldwell, a faculty member (F2), shared, *‘They’re (students) actively trying to figure out how do they apply and connect their learning to the world outside of the classroom.’*”

2.3 Emerging theme 3: Changing educational landscape

The rapidly changing world demands a shift toward flexible education that transcends traditional technology and teaching methods [3]. As the educational landscape evolves, graduate students increasingly desire learning models that integrate real-life experiences, emerging technologies like AI, and creative ways of knowing.

Logan, a Graduate Student (GS5), emphatically shared: *“[I want to] emphasize the importance of integrating AI and machine learning in education to prepare students for the future workforce. Institutions must adapt innovations and stay relevant by providing the necessary skill sets to students ... Institutions need to balance innovation with traditional methods to ensure all students, regardless of their comfort with technology, benefit from the HyFlex model.”*

Faculty participants indicate that flexible educational models must also include dynamic learning spaces that encourage the practical and creative application of knowledge. Therefore, to ensure effective HyFlex learning, institutions must invest

in reliable technology, robust infrastructure, and creative workspaces that deliver high-quality experiences for both in-person and online students.

Dr. Oz, a faculty member (F2), stated: *“We [faculty] should be preparing students to be the most adept users of technology and hybrid approaches to apply in all of their work in all of their relationships. And when we talk about technological infrastructure and support and investments in innovation and emerging technology, to me, that includes all the things we’ve been talking about, but it also includes investment in furniture [collaborative classroom furnishings] and creative workspaces.”*

According to graduate students and faculty, there is a need for continuous reflection, adaptation, and the responsible integration of new approaches to stay relevant and practical. These activities must be accompanied by comprehensive institutional support to enhance the HyFlex teaching and learning experience [13]. Both graduate students and faculty expect a responsive help desk and coordinated efforts with operational resources.

2.4 Emerging theme 4: Graduate student diverse needs

Graduate students loudly voiced that the institution must recognize and address all graduate students’ diverse needs [18]. The institution should invest time genuinely understanding its graduate student population rather than assuming all students possess the advanced skills necessary to navigate academic support resources or the technical proficiency to participate effectively in a HyFlex environment.

Dr. Smith (A2) shared: *“You know, we assume students know how to write because they wrote papers as undergraduate students, but writing for publications is a whole different game, and that is the standard... So we have to gear expectations to the reality of who the students are ...”*

Therefore, graduate students may need targeted guidance and resources to transition smoothly into their academic program, considering age, professional experience, digital literacy, and cultural background. To better accommodate these diverse needs, the institution must provide customized support, such as administrative services outside regular business hours. Graduate students also want formal recognition of their program achievements to share with employers and professional associations.

Lynette, a graduate student (GS6), contended: *“Graduate students often feel placed on the back burner with limited support, such as access to services outside of regular business hours and recognition of their milestones. The unique needs and identity of graduate students should be recognized and supported by the university, including providing proof of their accomplishments during transitional programs [the master to doctoral program].”*

Since most graduate students at the study university are nontraditional students, balancing full-time work responsibilities with evening graduate classes can be a challenge, according to administrator participants. Therefore, graduate students expect faculty to adopt flexible teaching approaches in this context. They also

expect faculty and the institution to foster a continued sense of belonging through intentional community-building efforts.

Graduate students also voiced they need a way to connect better, collaborate, and support one another. “Caroline, a graduate student (GS7), posited that *‘Engagement with other students and faculty is often more beneficial than the course content itself; HyFlex impacts relationships students build.’*” The graduate students want the institution to create spaces for them to connect, network, and build community to support each other. By consistently seeking graduate student feedback, faculty and the institution can cultivate a more inclusive and supportive educational community according to graduate student responses.

3 DISCUSSION

As a continuation of the original pilot study, these findings reinforce the CIM’s stakeholder recommendations and highlight the model’s relevance in the post-COVID context. However, given the evolving educational landscape, some stakeholder priorities have shifted, and new expectations have surfaced. For instance, the focus has moved from institutional emergency planning to the need for a comprehensive operational strategy that ensures HyFlex faculty are adequately prepared. Administrators support the idea that faculty and graduate students expect the institution to have an operational plan to train faculty on digital competencies and pedagogical best practices to meet the demands of the current HyFlex environment. Faculty members want academic programs to integrate innovative and creative learning methods and approaches.

Graduate students expect the institution to offer flexibility and accessibility, especially for adult learners balancing work and family commitments. They want to manage their studies alongside their personal and work responsibilities through flexible attendance options: modality choices are often critical factors in their higher education decisions. They also expect programs that focus on developing relevant academic and workplace skills with emerging technologies, such as AI. They want faculty to invite them into research and publishing opportunities. Lastly, graduate students want their diverse needs recognized and addressed by the institution.

4 NEXT STEPS

As previously discussed, these findings continue the pilot study conducted during the pandemic environment (2021–2023). They serve as a bridge to a broader dissertation study that further examines how the CIM’s stakeholder-focused educational interventions and cyclical communication loops improve teaching effectiveness, encourage investment in reliable instructional technology, deliver graduate student academic support functions, and support institutional sustainability in the post-COVID era [9], [10]. The DBR process was instrumental in gathering and iteratively analyzing the current study data to assess the impact of the CIM’s stakeholder-focused educational interventions on BL HyFlex adoption and juxtaposing them against the pilot studying findings [3], [14], [17]. The study findings provide critical data and insights for inclusion in the broader dissertation research data collection and analysis that will also help address the scholarly gaps in the testing of HyFlex models in real-world teaching and learning environments [2], [4], [5], [6], [7], [19].

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