

# Faculty Readiness for Hybrid Teaching: A Multi-University Study

DOI: <https://doi.org/10.63345/ijre.v14.i9.4>

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## ABSTRACT

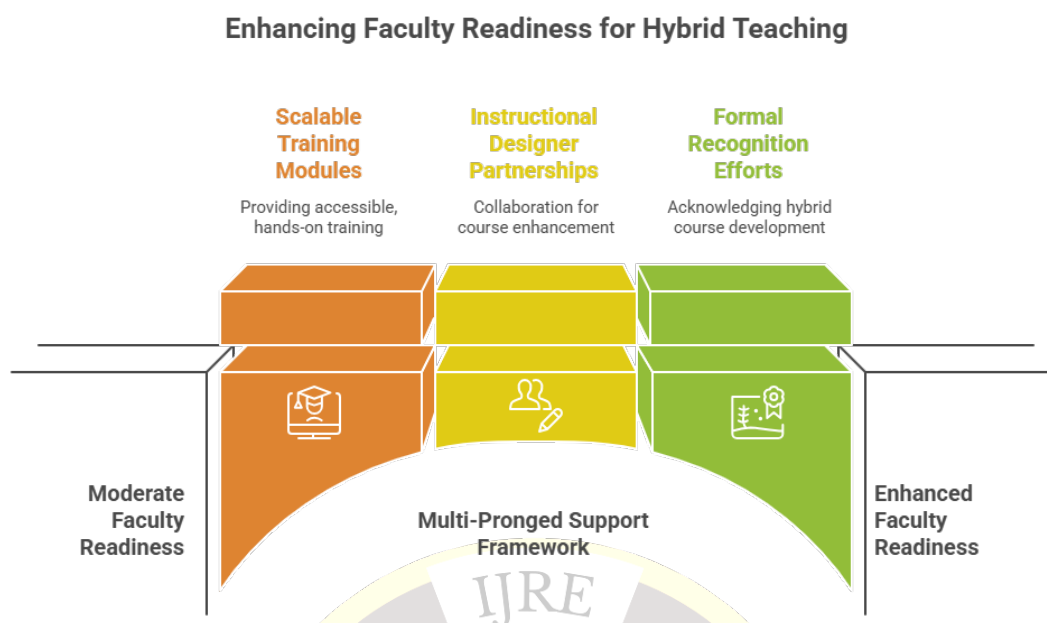
The shift toward hybrid teaching models—combining in-person instruction with online components—has accelerated in higher education, driven by advances in educational technology and the need for flexible learning environments. Faculty readiness is a critical factor in the success of hybrid modalities, encompassing instructors' technological competencies, pedagogical adaptations, and perceptions of institutional support. Although numerous studies have examined student experiences and learning outcomes in hybrid courses, faculty perspectives remain underexplored, particularly in multi-institution contexts. This study addresses this gap by assessing readiness among 312 faculty members across five universities—three public and two private—using a convergent mixed-methods design. Quantitative data were gathered via a 25-item Faculty Readiness Survey (FRS) measuring three dimensions: Technological Competence, Pedagogical Adaptation, and Institutional Support. Qualitative insights were obtained through semi-structured interviews with a purposive subsample of 42 participants, focusing on experiences, perceived barriers, and enablers in hybrid teaching. Findings indicate a moderate overall readiness level ( $M=3.6$  on a 5-point scale), with STEM faculty reporting higher technological confidence than their Arts & Humanities counterparts. Regression analyses identified prior online teaching experience and frequency of professional development participation as significant predictors of readiness. Thematic analysis revealed the importance of hands-on training workshops, instructional design collaboration, and peer learning communities, while time constraints and misaligned incentives emerged as persistent obstacles. Based on these results, we propose a multi-pronged framework for enhancing faculty readiness, including scalable training modules, embedded instructional designer partnerships, and formal recognition of hybrid course development efforts. Implications for policy, practice, and future research directions—such as longitudinal studies to track readiness evolution and cross-cultural comparisons—are discussed, underscoring the need for sustained institutional investment to maximize the pedagogical potential of hybrid teaching.

## KEYWORDS

Faculty Readiness, Hybrid Teaching, Technology Integration, Professional Development, Instructional Support

## INTRODUCTION

Over the past decade, higher education institutions have increasingly embraced hybrid teaching models, driven by rapid technological advancements and shifting learner expectations. Hybrid teaching, defined as a deliberate blend of face-to-face and online instructional components, promises to enhance flexibility, broaden access, and support differentiated learning pathways.



*Figure-1. Enhancing Faculty Readiness for Hybrid Teaching*

The COVID-19 pandemic further accelerated this trend, compelling faculty to pivot to remote or blended formats under constrained timelines. While considerable research has examined student engagement, satisfaction, and performance in hybrid environments, the role of faculty readiness—comprising instructors' skills, attitudes, and contextual supports—has received comparatively less empirical attention. Faculty readiness is not a static attribute but a multifaceted construct that evolves with exposure to digital pedagogies, access to resources, and institutional policies. It encompasses technological competence (proficiency with learning management systems, collaboration tools, and multimedia production), pedagogical adaptation (designing learner-centered activities, facilitating online discussions, and assessing learning across modalities), and perceptions of institutional support (availability of training, instructional design assistance, and recognition of hybrid teaching efforts).

Understanding faculty readiness is essential because instructor preparedness directly influences the quality of hybrid courses and student outcomes. Instructors confident in their technical skills and pedagogical strategies are more likely to create engaging content, provide timely feedback, and foster active learning communities. Conversely, faculty who lack support or perceive hybrid teaching as an added burden may resist innovation, resulting in suboptimal course design and delivery. Moreover, readiness can vary across disciplines, career stages, and institutional contexts, highlighting the need for tailored professional development and policy frameworks. For instance, STEM faculty often have greater familiarity with digital tools, whereas Arts & Humanities instructors may require additional scaffolding to translate text-based activities into interactive online experiences.

This study investigates faculty readiness for hybrid teaching across five diverse universities to identify common challenges and best practices. By employing a convergent mixed-methods approach, we integrate quantitative measures of readiness with qualitative accounts of faculty experiences. Our research questions are: (1) What is the current level of faculty readiness for hybrid teaching across multiple universities? (2) Which factors predict higher readiness, and how do these vary by discipline and prior experience? (3) What barriers and enablers do faculty perceive in adopting hybrid pedagogies? Addressing these questions will inform institutional strategies to build sustainable capacities for hybrid teaching, ensuring that faculty are equipped to leverage its

pedagogical potential. The paper proceeds by reviewing relevant literature, outlining the mixed-methods methodology, presenting quantitative and qualitative results, and discussing implications and future research directions.

### Faculty Readiness in Hybrid Teaching






Characteristic	STEM Faculty	Arts & Humanities Faculty
 Technological Competence	Higher confidence	Lower confidence
 Overall Readiness Level	Moderate (M = 3.6)	Moderate (M = 3.6)
 Predictors of Readiness	Prior online experience, professional development	Prior online experience, professional development
 Enablers	Hands-on training, instructional design collaboration, peer learning	Hands-on training, instructional design collaboration, peer learning
 Obstacles	Time constraints, misaligned incentives	Time constraints, misaligned incentives

Figure-2. Faculty Readiness in Hybrid Teaching

## LITERATURE REVIEW

Research on hybrid teaching readiness spans three primary dimensions: technological competence, pedagogical adaptation, and institutional support. Technological competence refers to faculty proficiency in using digital tools such as learning management systems (LMS), video-conferencing platforms, and content authoring software. Self-efficacy theory suggests that faculty with high confidence in their technical abilities are more likely to experiment with new tools and deliver effective hybrid instruction. Empirical studies corroborate this, showing positive correlations between technology self-efficacy and course quality indicators like multimedia integration and synchronous engagement.

Pedagogical adaptation involves reconfiguring traditional teaching methods for hybrid contexts. Active learning frameworks emphasize learner-centered activities, frequent formative assessments, and collaborative exercises that can be mediated digitally. Faculty must align learning outcomes with appropriate online and in-person activities, balancing asynchronous content delivery with synchronous interactions. However, many instructors report uncertainty in translating face-to-face strategies—such as small-group discussions—into online equivalents. This gap underscores the importance of pedagogical training focused on hybrid instructional design principles.

Institutional support emerges as a critical enabler of readiness. Comprehensive professional development programs that combine workshops, one-on-one consultations, and online resources have been linked to improved faculty preparedness. Instructional

designers play a key role, collaborating with faculty to develop course blueprints that integrate technology and pedagogy. Moreover, faculty learning communities—peer networks that facilitate knowledge sharing—can supplement formal training by providing ongoing support and best practice exchange. Conversely, lack of recognition for hybrid teaching efforts, limited release time, and insufficient technical infrastructure can dampen instructor motivation.

Comparative studies reveal variation in readiness across disciplines and regions. STEM faculty often adapt more readily to hybrid formats, possibly due to preexisting exposure to simulation software and data visualization tools. In contrast, Arts & Humanities instructors may prioritize text-based discussions and require tailored strategies for digital forum facilitation. Institutional culture also influences readiness: universities with established online learning centers and clear policies on hybrid teaching tend to exhibit higher faculty buy-in.

## **EDUCATIONAL SIGNIFICANCE**

The educational significance of faculty readiness for hybrid teaching is multifaceted, impacting student learning, institutional effectiveness, and the broader trajectory of higher education innovation. First, instructors who are well-prepared to teach in hybrid environments can design courses that leverage the strengths of both in-person and online modalities. This integrated approach supports differentiated instruction, allowing students to engage with content through various channels—video lectures, interactive simulations, discussion forums, and hands-on activities—thereby accommodating diverse learning preferences and accessibility needs. Faculty readiness thus underpins inclusive pedagogies that can narrow achievement gaps and foster equitable educational opportunities.

Second, prepared faculty contribute to improved student satisfaction and retention. Research indicates that clarity in course structure, timely feedback, and supportive instructor presence are key determinants of student engagement in online and hybrid courses. When faculty possess the technical and pedagogical skills to maintain consistent communication and design scaffolded learning activities, students report higher motivation, sense of belonging, and perceived learning gains. This is particularly significant as universities seek to expand hybrid offerings to meet the needs of non-traditional students, including working professionals and learners in remote regions.

Third, institutional resilience and competitiveness hinge on faculty readiness. Universities that invest in building hybrid teaching capacities can respond more agilely to disruptions—such as public health emergencies or infrastructure challenges—by ensuring continuity of instruction. Moreover, robust hybrid programs can attract new student populations seeking flexible learning options, thereby diversifying revenue streams and enhancing institutional sustainability.

Finally, advancing faculty readiness supports the scholarship of teaching and learning (SoTL). Engaged instructors are more likely to contribute to pedagogical research, share best practices at conferences, and publish case studies on hybrid teaching innovations. This collective knowledge exchange accelerates the field's understanding of effective teaching strategies and fosters a culture of continuous improvement in higher education pedagogy.

Given these educational implications, this study's focus on multi-university faculty readiness addresses a pressing need for empirical evidence to guide policy and practice. By delineating readiness dimensions, identifying predictors, and revealing contextual enablers and barriers, our findings inform the design of targeted professional development, resource allocation, and incentive structures.

Stakeholders—including provosts, teaching and learning centers, and department chairs—can leverage this evidence to craft strategic initiatives that empower faculty and enhance learning outcomes. In sum, faculty readiness for hybrid teaching is a linchpin for educational quality, equity, innovation, and institutional agility, with far-reaching benefits for learners, educators, and society.

## METHODOLOGY

### Research Design

This study employed a convergent mixed-methods design, integrating quantitative and qualitative data to triangulate findings on faculty readiness for hybrid teaching. The convergent approach facilitated simultaneous collection and analysis of survey and interview data, enabling comprehensive insights into readiness dimensions and contextual factors.

### Sampling and Participants

We targeted faculty members from five universities—three public and two private—selected to represent diversity in size, mission, and geographic region. Invitations were emailed to all full-time and part-time instructors teaching during the spring semester, yielding 312 survey respondents (response rate  $\approx 28\%$ ). Participants represented Arts & Humanities (22%), Social Sciences (18%), STEM (35%), and Professional Studies (25%). Among respondents, 62% were tenured or tenure-track, 28% adjunct or lecturer, and 10% administrative faculty with teaching responsibilities. A purposive subsample of 42 willing participants was drawn for qualitative interviews, ensuring representation across disciplines and prior online teaching experience levels.

### Data Collection

Survey data were collected over a four-week period using an online platform with automated reminders. Upon survey completion, respondents indicating interest in further participation received interview invitations. Interviews were scheduled within two weeks of survey closure, audio-recorded with consent, and transcribed verbatim.

### Data Analysis

**Quantitative Analysis:** Survey responses were exported to SPSS for descriptive statistics (means, standard deviations) and inferential tests. ANOVA examined disciplinary differences in readiness dimensions. Hierarchical multiple regression assessed predictors of overall readiness, with independent variables entered in blocks: (1) demographics (age, rank), (2) prior online teaching experience (years), and (3) professional development frequency (number of workshops attended in past year).

**Qualitative Analysis:** Interview transcripts were analyzed using thematic coding in NVivo. Two researchers independently coded transcripts, identifying initial nodes related to barriers, enablers, and perceived needs. Through iterative discussions, codes were refined into themes: Hands-On Training, Instructional Design Collaboration, Peer Learning Communities, Time Constraints, and Incentive Structures. Inter-coder reliability exceeded 0.85 (Cohen's  $\kappa$ ).

### Integration of Findings



Quantitative and qualitative findings were merged through joint display matrices, aligning statistical trends with thematic narratives. For example, regression results indicating professional development frequency as a readiness predictor were contextualized by interview accounts highlighting the value of hands-on workshops. Discrepancies—such as high institutional support scores despite interview complaints about limited release time—were investigated through additional member checks with selected participants.

### Ethical Considerations

The study received Institutional Review Board approval at each participating university. Participation was voluntary, with informed consent obtained for both survey and interview components. Data were anonymized, and identifiers removed prior to analysis. Interview recordings and transcripts were securely stored and destroyed after analysis completion.

This rigorous mixed-methods methodology ensured robust, contextually grounded insights into faculty readiness for hybrid teaching, laying the groundwork for evidence-based recommendations.

## RESULTS

### Quantitative Findings

**Overall Readiness:** Faculty readiness scores averaged 3.6 (SD = 0.7) on the 5-point FRS, indicating moderate preparedness for hybrid teaching. Dimension means were Technological Competence = 3.8 (SD = 0.6), Pedagogical Adaptation = 3.4 (SD = 0.8), and Institutional Support = 3.5 (SD = 0.7).

**Disciplinary Differences:** ANOVA revealed significant differences in Technological Competence by discipline,  $F(3,308) = 12.4$ ,  $p < .001$ . Post hoc tests (Tukey HSD) showed STEM faculty ( $M = 4.1$ ) scored higher than Arts & Humanities ( $M = 3.5$ ) and Social Sciences ( $M = 3.6$ ), while Professional Studies faculty ( $M = 3.8$ ) did not differ significantly from STEM. No significant disciplinary differences emerged for Pedagogical Adaptation or Institutional Support.

**Predictors of Readiness:** Hierarchical regression analysis identified two significant predictors of overall readiness. In block 2, prior online teaching experience ( $\beta = .42$ ,  $p < .001$ ) explained an additional 18% of variance ( $\Delta R^2 = .18$ ). In block 3, professional development frequency ( $\beta = .29$ ,  $p < .01$ ) accounted for an additional 9% ( $\Delta R^2 = .09$ ). Demographic variables (age, rank) were non-significant predictors.

### Qualitative Themes

**1. Hands-On Training:** Faculty consistently valued interactive workshops that allowed them to experiment with LMS features, video editing tools, and assessment platforms in safe “sandbox” environments. Instructors reported that passive webinars were less effective than in-person or synchronous small-group sessions where they could ask questions and receive immediate feedback.

**2. Instructional Design Collaboration:** Many participants emphasized the transformative role of instructional designers as co-authors in course development. Faculty appreciated guidance on aligning learning outcomes with digital activities and feedback loops, noting that these partnerships reduced trial-and-error and increased course coherence.

**3. Peer Learning Communities:** Informal faculty cohorts emerged organically within departments and across institutions. These communities facilitated resource sharing—such as template repositories and screencast tutorials—and provided emotional support during peak workload periods, such as the start of the semester.

### Merged Insights

Integration of quantitative and qualitative data elucidated how predictors of readiness manifest in practice. For instance, frequent participation in professional development—identified as a readiness predictor—corresponded with qualitative accounts lauding hands-on training sessions. Similarly, the importance of institutional support aligned with survey items measuring satisfaction with instructional design services. However, despite moderate support scores, interview narratives revealed gaps in formal policies rewarding hybrid course development, suggesting that quantitative measures may not fully capture incentive structures.

Overall, findings demonstrate that while faculty possess baseline technological skills, targeted pedagogical training and systemic incentives are essential to elevate readiness. Discipline-specific nuances—particularly in Arts & Humanities—underscore the need for context-sensitive support models. These results inform the framework proposed in the Discussion for enhancing faculty readiness across institutions.

### CONCLUSION

This multi-university, mixed-methods study offers a comprehensive portrait of faculty readiness for hybrid teaching, revealing moderate preparedness alongside critical areas for enhancement. Quantitative results indicate an overall readiness score of 3.6 on a 5-point scale, with Technological Competence scoring highest and Pedagogical Adaptation lowest among the three readiness dimensions. Significant disciplinary differences emerged in technology proficiency, with STEM faculty reporting greater confidence than Arts & Humanities and Social Sciences counterparts. Regression analyses identified prior online teaching experience and professional development engagement as robust predictors of readiness, underscoring the value of exposure and skill-building opportunities.

Qualitative themes enriched these findings, highlighting the pivotal role of hands-on training, instructional design collaboration, and peer learning communities in fostering readiness. Faculty testimonies illuminated persistent barriers—most notably time constraints and insufficient incentive structures—that quantitative surveys alone could not fully capture. The interplay between measured institutional support and qualitative perceptions of misaligned policies suggests that readiness metrics should encompass incentive mechanisms alongside resource availability.

This study contributes to the scholarship of teaching and learning by offering empirically grounded recommendations tailored to multi-institution contexts. It advances readiness measurement by integrating quantitative dimensions with qualitative experiences, providing a nuanced understanding of faculty needs. Moreover, it underscores the heterogeneity of readiness across disciplines, suggesting that one-size-fits-all approaches may be insufficient. The proposed framework serves as a strategic roadmap for higher education leaders and teaching and learning centers seeking to scale hybrid teaching initiatives effectively.

Nevertheless, the study has limitations. Although the sample encompassed diverse institutions, it was confined to five universities within one country, potentially limiting generalizability. Self-reported measures may also introduce response biases, and the

cross-sectional design precludes causal inferences. Despite these constraints, the convergent mixed-methods approach offers robust triangulation, lending confidence to the findings.

In conclusion, faculty readiness for hybrid teaching is a multifaceted phenomenon shaped by skills, experiences, and institutional contexts. By targeting professional development, instructional design collaboration, and incentive alignment, universities can bolster faculty preparedness, thereby enhancing the quality and equity of hybrid learning experiences. As hybrid teaching continues to evolve, sustained research and iterative policy refinements will be essential to equip faculty with the competencies and supports necessary to meet the dynamic needs of twenty-first century learners.

## **FUTURE SCOPE OF STUDY**

Building on the insights from this multi-university investigation, several avenues for future research emerge. First, longitudinal studies are needed to track changes in faculty readiness over time as institutions implement the proposed framework. Such research could measure the impact of specific interventions—like scaffolded microlearning modules or instructional designer partnerships—on readiness dimensions and subsequent student outcomes. Pre- and post-intervention assessments, combined with periodic qualitative check-ins, would yield richer causal evidence on effective strategies.

Second, expanding the study to include diverse institutional types—such as community colleges, technical institutes, and international universities—would enhance generalizability and illuminate context-specific factors. Community college faculty, for instance, may encounter unique challenges related to resource constraints and adjunct teaching roles. Comparative cross-cultural research could uncover variations in readiness models influenced by differing educational policies, technological infrastructures, and cultural attitudes toward online learning.

Third, integrating student perspectives alongside faculty readiness measures would provide a holistic view of hybrid teaching efficacy. By surveying and interviewing students enrolled in hybrid courses, researchers can examine whether faculty readiness predicts student engagement, satisfaction, and learning gains. Mixed-methods designs correlating faculty readiness scores with student performance data and experiential narratives would strengthen the evidence base for readiness frameworks.

Sixth, leveraging learning analytics and digital trace data presents opportunities to monitor real-time faculty engagement with hybrid course components. Analytics dashboards could track faculty utilization of LMS features, participation in online discussion boards, and frequency of content updates. Coupling these data with self-reported readiness measures and qualitative feedback would enable adaptive support systems that proactively address faculty challenges.

Seventh, exploring the intersection of equity and readiness is imperative. Future research should investigate how faculty readiness initiatives address—or inadvertently exacerbate—equity gaps. For example, faculty serving underrepresented student populations may require tailored training on accessible design principles and culturally responsive pedagogies.

Eighth, the global shift toward lifelong learning positions hybrid teaching as a model for professional and continuing education. Studies examining faculty readiness in corporate training and professional development contexts can bridge higher education and industry perspectives, highlighting transferable readiness frameworks across sectors.



In summary, future research on faculty readiness for hybrid teaching should adopt longitudinal, comparative, and technology-focused lenses, integrate student experiences, and examine institutional policies and equity implications. By pursuing these directions, scholars and practitioners can refine readiness frameworks, inform evidence-based interventions, and ultimately enhance the quality and inclusivity of hybrid learning environments worldwide.

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