



Application of Blended Training Models in Faculty Development at Medical Universities in the Post-Pandemic Era

Jingxian Zhang ^{1*}

¹ Student Affairs Department, Medical University, No.3 College Road, Longhua District, Haikou City, Hainan Province, China

ARTICLE INFO	ABSTRACT
Article history: RECEIVED 10 July 2025 ACCEPTED 18 July 2025 PUBLISHED 15 August 2025 Keywords: Blended Training, Faculty Development, Medical Education, Post-Pandemic, Professional Development	Blended learning has emerged as a pivotal approach in faculty development at medical universities following the COVID-19 pandemic. This study explores the application, benefits, challenges, and optimization strategies of blended training models within this context. Drawing from interviews, case analyses, and institutional comparisons, the findings highlight the model's strengths in flexibility, resource diversity, and interactivity, while also addressing issues such as design inconsistency, technological barriers, and limited evaluation systems. Recommendations for differentiated course design, integrated task structures, enhanced platform support, and teaching application mechanisms are proposed to advance the model's effectiveness in medical education.

1. Introduction

The COVID-19 pandemic has brought about profound changes in the global educational landscape. Traditional teacher training models that relied heavily on face-to-face instruction faced significant challenges during the pandemic, compelling educational institutions to rapidly explore alternative solutions. Against this backdrop, blended learning has emerged as a critical model for educational innovation and sustainable development^[1]. Blended training combines the interactivity of in-person instruction with the flexibility of online learning, enhancing teaching efficiency and expanding pathways for professional development^[2].

In the field of medical education, teachers increasingly assume multifaceted roles, engaging in foundational teaching, clinical practice, and academic research. These demands impose higher requirements on time management and continuous knowledge acquisition^[3]. In the post-pandemic era, the strategic significance of blended training for faculty development in medical schools has become more prominent. While extensive studies have examined blended learning in higher

* Corresponding author: Jingxian Zhang
Email address: zjxpatty@qq.com
<https://doi.org/10.70702/bdb/BXPJ9180>

education, there remains a relative paucity of systematic research focusing specifically on teacher training in medical education.

This study aims to explore the practical application, challenges, and feasible optimization strategies of blended training in medical school faculty development, seeking to provide both theoretical and practical models for post-pandemic teacher development in higher education.

Additionally, this research adopts a mixed-methods approach involving interviews and case analyses to comprehensively assess the adaptability and effectiveness of the blended training model for medical educators. The study aims to identify the strengths and limitations of the model in practice and offer targeted improvement suggestions. Supported by empirical data and inter-institutional comparisons, this study aspires to contribute to the development of a modernized teacher training system in Chinese medical schools.

2. Research Status

2.1 Research Progress in China

In recent years, blended training has increasingly become a central mode of faculty development in Chinese higher education. Scholars have examined this model from three key perspectives: theoretical framework construction, practical pathway exploration, and platform system development.

Development of Training Models: Liu Haifeng et al. (2023) proposed a blended training model based on the concept of the "flipped classroom," which emphasizes integrating online self-learning with offline reflective interaction to enhance instructional outcomes^[4]. Other scholars, such as Li Na and Chen Libo (2023), approached the issue from constructivist learning theory, advocating a shift from teacher-centered to learner-centered paradigms in the structure of faculty development^[5].

Exploration of Practical Pathways: Institutions like Shanghai University of Medicine and Health Sciences (2023) implemented a hybrid professional development program for nursing faculty, combining online modules and onsite workshops to improve teaching capacity and course design^[6]. Similarly, medical schools at Sichuan University and Zhejiang University have deeply integrated online and offline instruction to form teaching communities and increase faculty engagement in pedagogical reforms.

Development of Platform Support Systems: Tianjin Medical University (2023) promoted hybrid courses and built a closed-loop teaching model consisting of pre-class preparation, in-class interaction, and post-class review to enhance implementation efficiency^[7]. Institutions like Fudan University developed teacher development platforms offering visual progress tracking and AI-driven learning resource recommendations^[8].

Despite initial success, challenges such as fragmented content, disconnected course design, and lack of scientific assessment mechanisms still hinder the full potential of blended faculty training in medical schools^[9].

International Research Trends

2.2 International Research Trends

Globally, attention toward blended learning in medical education is also intensifying, with research focusing on digital competency development, instructional innovation, and learning outcome evaluation.

Stojan et al. (2024) noted that blended learning offers flexible pathways particularly suited to adult learners and in-service educators^[1]. Xu et al. (2024), in a systematic review, highlighted that

game-based learning (GBL) strategies enhance learner motivation and engagement in technical skills development for medical students^[2].

Custer (2024) emphasized the importance of structured professional development programs to improve faculty digital adaptability in blended environments^[10]. Sadiq et al. (2024) introduced the "E-Portal" initiative, integrating MOOCs, synchronous classrooms, and digital assessment tools to elevate instructional design and evaluation competencies^[11]. These studies also stress the necessity of ongoing technical support and institutional policy backing for the effective implementation of blended models.

Furthermore, Shrivastava and Nurhidayati (2024), through an analysis of student-led blended learning cases, demonstrated the model's capacity to foster learner autonomy, collaboration, and formative assessment in medical education^[3]. They recommend strengthening faculty training in learning activity design and reflective facilitation.

3. Results and Discussion

3.1 Advantages of Blended Training

Flexible Time and Space Allocation: Medical school faculty often juggle clinical duties, research tasks, and teaching responsibilities, making traditional centralized training difficult to schedule. Blended training overcomes spatial and temporal constraints, allowing faculty to choose learning times and modules that align with their personal schedules. This "pause-and-resume," repeatable, and mobile learning mode is particularly favored by junior and part-time instructors. Survey data indicates that blended learning significantly alleviates conflicts between work and training, improving participation rates.

Diverse Resource Accessibility: Traditional training programs are often limited by inadequate faculty expertise and uniform content. In contrast, blended training platforms integrate a wide range of high-quality resources, including lecture recordings, micro-courses, e-textbooks, and international journal access. Faculty can select content tailored to their instructional needs, enhancing both the relevance and effectiveness of training. Many participants reported that the online resources expanded their pedagogical thinking and were already applied in course redesigns.

Enhanced Interactivity and Feedback: Blended platforms typically offer features like online discussions, assessments, and learning analytics. Faculty engage with peers and experts via forums to ask questions and share insights, forming a "learn-feedback-adjust" loop. Real-time feedback and personalized reports support self-evaluation and adaptive learning. Completion rates in blended programs were consistently higher than those in traditional in-person sessions.

Inter-Institutional Collaboration: Blended training expands opportunities for cross-institutional collaboration, enabling faculty from diverse geographic and institutional backgrounds to interact on shared platforms. Features like themed learning groups and virtual seminars support deep exchanges and joint curriculum reform. Events such as teaching showcases and micro-teaching contests promote mutual learning and the development of teaching communities. Many participants cited new insights and long-term collaborations arising from such interactions.

3.2 Challenges in Implementation

Lack of Tailored Content: Some blended training programs offer overly generalized content lacking practical instructional guidance, especially in clinical or experiential teaching contexts. Faculty feedback suggests the need for content aligned with job roles, teaching stages, and professional domains.

Uneven Platform Literacy: Digital literacy disparities exist among faculty. While younger instructors adapt easily, older faculty often face technical barriers and require additional support. A lack of introductory guidance reduces training effectiveness.

Unclear Course Design Logic: Some programs suffer from content redundancy between online and offline components, causing fatigue and disengagement. In cases where online modules are followed by superficial offline reviews, the lack of real-world task alignment diminishes engagement and learning outcomes.

Single-Dimensional Evaluation: Current assessment systems rely mainly on quantitative indicators like attendance and task completion, neglecting formative learning, reflective practices, and instructional application. Experts recommend incorporating peer review, teaching demonstrations, and course output evaluations to build more comprehensive assessment systems.

3.3 Optimization Strategies and Recommendations

Differentiated Curricula by Career Stage: Training content should be stratified according to faculty experience. New instructors require foundational pedagogical training, mid-career faculty benefit from curriculum development and mentorship skills, and senior faculty need leadership training and reform strategies.

Integrated Online-Offline Design: Programs should align theoretical modules with hands-on activities, such as a three-phase model of "online learning + offline teaching practice + reflection." Components like instructional design tasks and student simulation teaching can enhance realism and outcomes.

Enhanced Technical Support and UX: Platforms should simplify interfaces and provide features like one-click navigation, smart reminders, and content search. "Teacher Assistants" and tech support teams should be established for real-time help. Regular workshops can boost platform confidence.

Multi-Dimensional Assessment Mechanisms: Evaluation should shift from mere participation to developmental growth, using tools like learning logs, reflective journals, peer reviews, and student feedback. Behavioral analytics can build learning profiles and inform personalized growth paths.

Teaching Outcome Transformation Mechanisms: Institutions should encourage the translation of training outcomes into classroom practice. Events like "Teaching Outcomes Showcases" allow faculty to present redesigned activities or digital resources, reinforcing the transition from training beneficiaries to contributors.

4. Conclusion

Blended training has become the new norm in post-pandemic faculty development for medical schools. Its flexible, open, and personalized features align well with the evolving professional needs of medical educators. This study finds that blended models significantly enhance participation, pedagogical innovation, and instructional capacity. However, issues such as unclear goals, technological barriers, disjointed course design, and weak evaluation systems hinder further implementation.

To promote deep integration, medical institutions should adopt a systemic approach involving institutional design, platform optimization, tailored content, technical support, and outcome transformation. Blended training should also be embedded within broader instructional reforms to leverage faculty leadership in curriculum innovation and digital transformation.

Future studies should explore the long-term impacts of blended training on faculty identity, teaching styles, and student satisfaction, continuously refining models and strategies to improve overall teaching quality and educational services in medical institutions.

References

- [1] Stojan, J., et al. (2024). Transformative online education in medical training: Innovations and strategies. *Journal of Medical Education*, 58(4), 123–130.
- [2] Xu, Y., et al. (2024). Game-based learning in medical education: A systematic review. *Medical Teacher*, 46(2), 75–81.
- [3] Shrivastava, A., & Nurhidayati, A. (2024). Student-led facilitation in medical education: A transformative approach. *BMC Medical Education*, 24(1), 15–22.
- [4] Liu, H., & Wang, Y. (2023). Design and practice of blended learning models in faculty development. *Modern Distance Education Research*, (2), 48–56.
- [5] Li, N., & Chen, L. (2023). Practice dilemmas and countermeasures in MOOC-based blended training for university teachers. *Theory and Practice of Education*, (22), 85–89.
- [6] Shanghai University of Health and Medicine. (2023). Our university hosted the second session of the nursing faculty development workshop. <https://www.sumhs.edu.cn/4f/2f/c10271a282415/page.htm>
- [7] Tianjin Medical University. (2023). Notice on application for 2023-2024 blended course projects. <https://www.jwc.sjtu.edu.cn/info/1257/12662.htm>
- [8] Yang, L. (2024). Application of blended training in improving young faculty's information literacy. *Continuing Education Research*, (3), 61–67.
- [9] Zhang, D., et al. (2024). Evaluating blended teaching models in medical colleges. *Journal of Medical Education*, 58(4), 123–130.
- [10] Custer, B. (2024). Professional development for blended learning: Challenges and opportunities. *Educational Technology Research and Development*, 72(3), 345–360.
- [11] Sadiq, R., et al. (2024). E-Portal training program: Empowering educators in digital teaching. *International Journal of Educational Technology*, 41(1), 45–60.