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A Study on Implementing a Blended Learning Model at Intermediate-Level Vocational Education Institutions in Hanoi

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A B S T R A C T

The growing demand for flexible, technology-integrated learning models in vocational education has brought blended learning (BL) to the forefront of innovation in pedagogy. This study investigates the feasibility and adaptability of implementing a BL model within intermediate-level vocational education and training (VET) institutions in Hanoi, Vietnam. Through literature review, comparative analysis of international BL models, and a field survey conducted at 12 VET institutions, the research identifies key institutional, technical, and pedagogical conditions affecting BL adoption. Findings reveal that while Hanoi's VET system faces infrastructural limitations and digital competence gaps among instructors, there is significant potential to implement a module-based rotational BL model. This model integrates online delivery of theoretical content with in-person practical sessions, aligning with the hybrid training requirements of vocational education. The paper also highlights the need for systemic reforms including teacher retraining, digital infrastructure investment, and industry-school partnerships to support long-term BL deployment. The study contributes a contextualized model for blended training in VET and offers policy recommendations to facilitate sustainable educational innovation in Vietnam.

Keywords: Blended Learning, Vocational Education And Training, Intermediate Level, Hanoi, Digital Pedagogy, Education Reform

1. Introduction

In the context of digital transformation and globalization of education, Blended Learning (BL) has become an essential trend worldwide. This model integrates traditional face-to-face instruction with online learning methods, leveraging information technology to enhance flexibility and learning effectiveness (Graham, 2006; Horn & Staker, 2014). Particularly in vocational education and training (VET), where both theoretical and practical components are critical, BL is seen as a promising solution for improving training quality and learner adaptability in the labor market.

In Vietnam, the vocational education system has made various efforts to innovate in content, pedagogy, and technology. However, the implementation of blended learning at the intermediate vocational level remains limited and unfamiliar to many institutions. Meanwhile, the demand for flexible learning pathways—especially among diverse learners ranging from lower secondary graduates to working adults—is increasing. Furthermore, the COVID-19 pandemic has underscored the urgent need for institutions to adopt flexible teaching formats, including blended models.

Currently, few studies in Vietnam focus deeply on selecting and applying BL models appropriate to vocational education. Most existing research describes general influencing factors or presents individual cases, lacking a systematic review and practical feasibility assessment under the specific conditions of intermediate-level vocational training. In response to this gap, this study was conducted to synthesize, analyze, and evaluate a range of existing BL models and assess the feasibility of applying such models in vocational institutions in Hanoi. It ultimately proposes a context-appropriate blended learning model for the VET sector.

Specifically, the research reviews 25 domestic and international BL models and categorizes them into three main groups: (1) models focusing on teaching–learning organization (e.g., Rotation Model, Flex Model); (2) models analyzing key implementation factors such as policy, infrastructure, and digital capacity; and (3) systemic models emphasizing institutional governance, learning management systems (LMS), and stakeholder engagement. Based on a comparative analysis of these models and field surveys conducted across 12 intermediate vocational institutions in Hanoi, a feasible and adaptable BL model is proposed.

This study aims to provide both theoretical and empirical insights for the effective deployment of blended learning in Vietnam's vocational education system, particularly in the context of pedagogical reform and the growing momentum toward digital transformation in education.

2. Theoretical background and related work

2.1. Definition and Nature of Blended Learning

Blended Learning (BL) is a modern pedagogical model that intentionally combines traditional face-to-face instruction with online learning to leverage the strengths of both formats in improving educational outcomes. Graham (2006) defines BL as "the deliberate combination of face-to-face and online learning to support learning outcomes," highlighting the role of instructional design and technology integration.

In the context of vocational education and training (VET), BL offers notable advantages. It allows theoretical content to be delivered online while retaining the hands-on nature of practical skills training. Horn and Staker (2014) view BL as an effective hybrid between conventional in-person education and fully online learning—particularly beneficial in application-driven training programs.

2.2. Classification and Analysis of Blended Learning Models

According to widely accepted frameworks (Graham, 2006; Horn & Staker, 2014), BL models can be categorized into three major types:

(1) **Instructional Organization Models:**

- **Rotation Model:** Learners alternate between online and offline sessions on a fixed schedule. This model is suitable for vocational training where theoretical components can be separated from practical exercises.
- **Flex Model:** Most content is delivered online, while instructors play a guiding role.
- **Flipped Classroom:** Learners acquire theoretical knowledge at home through videos or reading materials, while class time is used for practical activities and problem-solving.

(2) **Factor-Based Models:**

These models consider the impact of external and internal factors such as policy, digital competencies, IT infrastructure, and institutional management. Wang et al. (2015) emphasize that successful BL implementation depends more on institutional readiness and coordination than on technology alone.

(3) **Systemic/Ecosystem Models:**

These models aim to develop a digital training ecosystem involving LMS platforms, digital content workflows, and collaboration between schools, students, and industry. Such models align with broader digital transformation initiatives in education.

Based on field research conducted at 12 intermediate-level VET institutions in Hanoi (Hanoi Department of Labor, Invalids and Social Affairs, 2023), the research team recommends a **Module-Based Rotation Model**. This model proposes that 40–50% of theoretical content be delivered online, while practical components are maintained in physical workshops or training centers—offering flexibility while preserving the vocational integrity of the program.

2.3. International and Vietnamese Studies on Blended Learning

International studies have shown the effectiveness of BL in enhancing learning outcomes. Lim et al. (2016) report that BL fosters critical thinking and technology skills among vocational learners in Singapore. Krismadinata et al. (2020) highlight how BL expands access to education in rural areas of Malaysia with limited resources. Studies from the U.S. and Europe further confirm that BL facilitates personalized learning and improves VET performance (Graham, 2006; Horn & Staker, 2014).

In Vietnam, Nguyễn Thị Minh Hằng (2021) explored the potential for implementing BL in vocational schools. Trần Quốc Hùng and Lê Thị Thúy (2020) proposed a flexible digital classroom model, while Phạm Thị Thanh Hương (2021) emphasized the importance of teachers' digital competencies in successful BL adoption. However, most of these studies remain conceptual, with limited empirical validation or practical implementation models.

To address this gap, a field survey was conducted at 12 intermediate-level VET institutions in Hanoi between November 2022 and April 2023. The results revealed:

- 66.7% of institutions lacked a stable learning management system (LMS),
- 58.3% of instructors had never received training in digital course design,
- 71% of students had never participated in an online class.

These findings underscore the disparity between theoretical discourse and real-world implementation and affirm the need for a localized, context-specific BL model in Vietnam's vocational education sector.

3. Research methodology

3.1. Research Design

This study adopts a **mixed-methods approach**, integrating both qualitative and quantitative methodologies to comprehensively assess the feasibility of implementing blended learning (BL) models at intermediate-level vocational education and training (VET) institutions in Hanoi. The research design comprises three main phases: (1) a theoretical review of international BL models; (2) field surveys at intermediate-level VET institutions in Hanoi; and (3) analysis, comparison, and proposal of a locally appropriate model.

3.2. Instruments and Survey Participants

Primary data were collected through structured questionnaires and semi-structured interviews. The questionnaires were tailored for three target groups: administrators, teachers, and students. A total of **12 intermediate-level VET institutions in Hanoi** participated in the survey, resulting in **240 valid responses**, including 24 administrators, 72 teachers, and 144 students.

Additionally, semi-structured interviews were conducted with representatives from **6 VET institutions** to gain deeper insights into perceptions, challenges, and needs regarding BL implementation in Hanoi's vocational schools.

3.3. Data Processing and Analysis

Quantitative data from the questionnaires were processed using **SPSS software**, employing descriptive statistics (frequency, percentage) and cross-tabulation analysis to compare responses among stakeholder groups. Qualitative data from the interviews were analyzed using **thematic coding** to identify key factors influencing the implementation of blended learning models in Hanoi's practical context.

3.4. Research Limitations

This study is confined to 12 intermediate-level VET institutions located in Hanoi—a major educational hub with relatively favorable infrastructure and digital readiness. Therefore, the findings are context-specific and may not be generalizable to institutions in other regions of Vietnam.

Moreover, this study focuses on model proposal and feasibility assessment without implementing pilot programs or measuring practical outcomes. Nonetheless, it represents an important starting point by providing preliminary empirical evidence to guide future applied research and offering reference material for localities with similar conditions in developing blended learning policies for the VET sector.

4. Discussion and Conclusion

The results indicate that implementing a blended learning model in intermediate-level VET institutions in Hanoi is feasible, but requires comprehensive investment in digital infrastructure, instructor capacity building, and pedagogical innovation. The high proportion of institutions lacking a stable LMS (Hanoi Department of Labor, Invalids and Social Affairs, 2023) and untrained instructors in digital content design (Pham Thi Thanh Huong, 2021) reflects a significant gap between theoretical requirements and actual implementation conditions. This highlights the urgent need to develop digital competence among teachers and to invest in appropriate LMS platforms tailored to the specific characteristics of vocational education.

Compared to internationally recognized BL models, the proposed "Module-Based Rotation" model shares core principles with Rotation, Flex, and Flipped Classroom models (Graham, 2006; Horn & Staker, 2014), but has been contextually adapted to Hanoi's educational conditions—particularly in the balance between online theoretical instruction and in-person practical training. Unlike the Flex or Flipped Classroom models, which demand a high degree of learner autonomy, this model retains the structured and guided nature typical of intermediate-level vocational training.

This study clarifies the theoretical foundations, examines the real-world conditions, and proposes a context-appropriate BL model for intermediate-level VET institutions in Hanoi. The proposed model demonstrates strong applicability, especially amid ongoing digital transformation in education and the need for flexible training formats post-pandemic. However, successful implementation requires coordinated efforts involving policy-making, infrastructure investment, and professional development. The findings provide practical reference material for similarly resourced regions and a foundation for further research and pilot applications.

References

1. Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *The Handbook of Blended Learning: Global Perspectives, Local Designs* (pp. 3–21). San Francisco, CA: Pfeiffer Publishing.
2. Horn, M. B., & Staker, H. (2014). *Blended: Using Disruptive Innovation to Improve Schools*. San Francisco, CA: Jossey-Bass.
3. Wang, Y., Han, X., & Yang, J. (2015). Revisiting the blended learning literature: Using a complex adaptive systems framework. *Educational Technology & Society*, 18(2), 380–393.

4. Lim, C. P., Wang, L., & Graham, C. (2016). Driving forces in adopting blended learning in vocational training institutes. *International Journal of Training Research*, 14(3), 224–239.

5. Krismadinata, K., Fitri, R. A., & Abdurrahman, M. (2020). Exploring the effectiveness of blended learning in vocational education: Case study in rural Malaysia. *Journal of Technical Education and Training*, 12(2), 41–49.

6. Nguyễn Thị Minh Hằng. (2021). Nghiên cứu khả năng ứng dụng mô hình lớp học kết hợp tại các trường trung cấp nghề. *Tạp chí Giáo dục Nghề nghiệp*, (35), 12–17.

7. Trần Quốc Hùng & Lê Thị Thúy. (2020). Thiết kế lớp học linh hoạt dựa trên công nghệ số. *Tạp chí Khoa học Giáo dục Nghề nghiệp*, (27), 25–30.

8. Phạm Thị Thanh Hương. (2021). Năng lực số của giáo viên trong triển khai mô hình học tập kết hợp. *Tạp chí Công nghệ và Giáo dục*, (19), 45–49.

9. Allen, I. E., & Seaman, J. (2013). *Changing course: Ten years of tracking online education in the United States*. Sloan Consortium.

10. Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. San Francisco, CA: Jossey-Bass.