

Factors Affecting Decision-Making in the Management of Blended Learning Teaching Activities in Vietnamese Higher Education

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ABSTRACT: Blended learning has become an important mode of delivery in higher education, requiring more systematic decision-making in the management of teaching activities. This study examines factors affecting decision-making in the management of blended learning teaching activities within Vietnamese higher education. A quantitatively driven design was employed using survey data from 338 lecturers, including 59 who concurrently held managerial positions, across four higher education institutions in Ho Chi Minh City, Vietnam. The quantitative data were analysed using descriptive statistics, Pearson correlation, and multiple regression, while interview data from 12 participants were used to explain key quantitative patterns. The findings showed that all eight factors were perceived as highly influential, with policy conditions receiving the highest mean score and lecturers' awareness the lowest, although still within the high range. All factors were positively and significantly correlated, but none showed a statistically significant independent effect in the regression model. Interview data suggested that decision-making was shaped by the combined operation of policy, infrastructure, stakeholder awareness, legal considerations, and managerial capacity rather than by isolated determinants. The study suggests that blended learning management should be understood as a multidimensional and systemic process.

Keywords: blended learning, teaching management, decision-making, influencing factors, Vietnamese higher education.

ABSTRAK: Pembelajaran bauran (blended learning) telah menjadi salah satu mode penyelenggaraan pembelajaran yang penting di pendidikan tinggi, sehingga memerlukan pengambilan keputusan yang lebih sistematis dalam pengelolaan kegiatan pembelajaran. Penelitian ini bertujuan untuk mengkaji faktor-faktor yang memengaruhi pengambilan keputusan dalam pengelolaan kegiatan pembelajaran berbasis blended learning di perguruan tinggi Vietnam. Penelitian ini menggunakan desain yang didominasi pendekatan kuantitatif dengan memanfaatkan data survei dari 338 dosen, termasuk 59 dosen yang juga merangkap sebagai pimpinan/manajer, yang berasal dari empat perguruan tinggi di Kota Ho Chi Minh, Vietnam. Data kuantitatif dianalisis menggunakan statistik deskriptif, korelasi Pearson, dan regresi berganda, sedangkan data wawancara dari 12 partisipan digunakan untuk menjelaskan pola-pola utama yang ditemukan pada hasil kuantitatif. Hasil penelitian menunjukkan bahwa seluruh delapan faktor dipersepsikan memiliki pengaruh yang tinggi, dengan kondisi kebijakan memperoleh nilai rata-rata tertinggi, sedangkan kesadaran dosen memperoleh nilai rata-rata terendah, meskipun masih berada pada kategori tinggi. Seluruh faktor menunjukkan korelasi positif dan signifikan, namun tidak ada satu pun yang menunjukkan pengaruh independen yang signifikan secara statistik dalam model regresi. Data wawancara mengindikasikan bahwa pengambilan keputusan dibentuk oleh interaksi berbagai faktor, meliputi kebijakan, infrastruktur, kesadaran para pemangku kepentingan, aspek hukum, dan kapasitas manajerial, bukan oleh faktor-faktor yang berdiri sendiri. Penelitian ini menunjukkan bahwa pengelolaan pembelajaran blended learning perlu dipahami sebagai suatu proses yang bersifat multidimensional dan sistemik.

Kata Kunci: blended learning, faktor-faktor yang memengaruhi, pengelolaan pembelajaran, pengambilan keputusan, pendidikan tinggi Vietnam.

INTRODUCTION

Blended learning has become an increasingly important mode of delivery in higher education in response to digital transformation, pedagogical flexibility, and changing learner expectations. Because blended learning is interpreted and designed in different ways, institutions need to clarify how face-to-face and online components are integrated within specific teaching contexts (Alammery et al., 2014; Hrastinski, 2019; McGee & Reis, 2012). This trend is consistent with evidence that blended learning has become increasingly prominent in higher education, where its effectiveness depends not only on technological integration but also on institutional capabilities, pedagogical design, and support conditions (Castro, 2019). Although earlier studies largely focused on instructional design, student engagement, and learning outcomes, more recent scholarship has shown that blended learning should also be understood as an institutional and organizational issue requiring coordinated support, policy alignment, and implementation capacity (Sareen & Mandal, 2024; Mohammadi et al., 2025).

This institutional perspective has become increasingly prominent in recent literature. Sareen and Mandal (2024), in their systematic and integrative review, identified recurrent barriers to blended learning implementation, including design limitations, insufficient training, and institutional readiness. The online component of blended learning also requires adequate technical support, instructor preparation, learner readiness, and appropriate course design, as challenges in online teaching may directly affect the quality of blended implementation (Kebritchi et al., 2017; McGee & Reis, 2012). Similarly, Mohammadi et al. (2025) argued that effective blended learning depends not only on digital platforms, but also on teacher support, periodic training, and workable institutional practices. In a broader synthesis, Anthony Jr et al. (2022) concluded that blended learning adoption and implementation in higher education are shaped by interacting factors associated with students, lecturers, and administration. Taken together, these studies indicate that blended learning should not be viewed merely as a pedagogical arrangement, but as a multidimensional institutional process.

This institutional dimension is especially important from a management perspective. In practice, the management of teaching activities in blended learning may involve planning, organizing, coordinating, supporting, monitoring, and improving teaching processes across face-to-face and digital environments. Moskal et al. (2013) argued that successful blended learning requires alignment across institutional, faculty, and student goals rather than instructional choices alone. Likewise, OECD (2023) emphasized that digital education reform requires coordination across infrastructure, digital resources, professional development, and governance arrangements. More specifically, Galvis (2018) proposed that decision-making in blended learning should be understood through educational, organizational, technological, and operational dimensions, while Ali and Georgiou (2025) showed that the institutional adoption and diffusion of blended learning

are shaped by strategic direction, organizational arrangements, and routinized implementation. Collectively, these studies suggest that blended learning in higher education is not only a matter of instructional design, but also a matter of institutional decision-making and managerial coordination.

This issue is particularly relevant in Vietnamese higher education, where digital transformation remains uneven across institutions. Recent studies have shown that blended learning was not widely adopted before the COVID-19 pandemic and that its subsequent expansion has been associated with the integration of learning management systems and broader institutional reform efforts (Kieu et al., 2024). Evidence from online learning contexts after COVID-19 also shows that faculty and students' perceptions are closely connected with technological readiness, interaction, motivation, and institutional support (Almahasees et al., 2021). At the same time, this line of research has highlighted the lack of sufficiently proactive institutional measures to address lecturers' concerns during the adoption process (Kieu et al., 2024). More broadly, the digitalization of higher education in Vietnam has been driven by policy reform and institutional change, but implementation still depends heavily on local capacity, support conditions, and managerial coordination (Le, 2024; Le et al., 2025). These findings suggest that blended learning in Vietnamese higher education is not merely a matter of technological uptake, but also one of institutional preparedness, managerial awareness, and implementation capacity. Previous evidence from Vietnamese higher education has examined how core teaching practices contribute to effective teaching in blended learning (Nguyen & Le, 2026). Building on this related evidence, the present study extends the discussion from pedagogical practices and teaching effectiveness to the institutional, technological, legal, human, and managerial factors that shape decision-making in the management of teaching activities in blended learning.

The relevance of decision-making as an analytical lens is further reinforced by research on higher education governance more broadly. Thiedig and Wegner (2024), in their scoping review of evidence use in higher education decision-making and policy, found that institutional decisions are shaped by organizational context, institutional capacity, and the availability and use of evidence. In relation to blended learning, this implies that decisions about teaching activities are unlikely to depend on one isolated factor. Instead, they are more likely to reflect the interaction of institutional, technological, legal, and human conditions. Existing research has already identified barriers, readiness conditions, and implementation challenges, but it less frequently explains how these factors operate together within actual managerial decision-making processes (Anthony Jr et al., 2022; Galvis, 2018; Sareen & Mandal, 2024). This leaves an important gap in understanding how decisions related to the management of teaching activities in blended learning are formed, particularly in Vietnamese higher education, where institutional support and managerial capacity remain uneven (Kieu et al., 2024; Le et al., 2025).

Conceptually, this study is informed by institutional theory and a systems perspective. Institutional theory suggests that organizational decision-making is

shaped by regulative, normative, and cognitive conditions, including formal rules, shared expectations, and institutionalized understandings that guide organizational action (Meyer & Rowan, 1977; Scott, 2014). In the context of this study, policy conditions and legal issues related to digital learning materials represent regulative conditions; managers', lecturers', and students' awareness reflects normative and cognitive dimensions of institutional readiness; and ICT development, technological infrastructure, and managerial capacity represent organizational conditions that enable or constrain implementation. At the same time, a systems perspective helps explain why these factors should not be treated as isolated determinants, because decisions about blended learning teaching activities are made within an interconnected institutional environment (von Bertalanffy, 1968).

From this theoretical position, the novelty of the present study lies in shifting attention from blended learning adoption, barriers, or teaching effectiveness to decision-making in the management of blended learning teaching activities. The study contributes to current knowledge by showing that such decision-making is shaped by a configuration of institutional, technological, legal, human, and managerial conditions rather than by one dominant factor. This perspective extends the literature on blended learning governance by explaining how multiple conditions operate together within a developing higher education context.

Drawing on the reviewed literature, the factors affecting decision-making in the management of teaching activities in blended learning can be broadly grouped into institutional, technological, legal, and human dimensions (Anthony Jr et al., 2022; Galvis, 2018; OECD, 2023). In the present study, these dimensions are operationalized through eight specific factors: ICT development, policy conditions, legal and intellectual property issues related to digital learning materials, technological infrastructure, managers' awareness, lecturers' awareness, students' awareness, and managers' organizational capacity. This operationalization allows the study to move from broad conceptual dimensions in the literature to contextually specific factors that can be examined empirically in Vietnamese higher education. Legal and intellectual property issues are relevant because digitally mediated teaching increasingly involves the use, sharing, adaptation, and storage of digital learning materials, raising copyright, licensing, and compliance concerns (Mezei, 2023). Students' awareness is likewise relevant because the implementation of blended learning depends not only on institutional planning and lecturer readiness, but also on students' understanding, acceptance, and willingness to engage with digitally mediated learning environments (Hamad et al., 2024; Hossain et al., 2024). At the same time, lecturers' and managers' awareness, together with managerial capacity, remain central because the implementation of blended learning depends heavily on how institutional actors interpret, support, and coordinate teaching activities in practice.

Against this background, the present study examines the factors affecting decision-making in the management of teaching activities in blended learning within Vietnamese higher education. Specifically, it investigates the perceived level of influence of eight institutional, technological, legal, and human factors on

such decision-making, examines the relationships among these factors, and interprets the resulting quantitative patterns in light of participants' institutional experiences and perspectives. In doing so, the study addresses the following research questions:

RQ1. To what extent are the identified factors perceived to influence decision-making in the management of teaching activities in blended learning within Vietnamese higher education?

RQ2. What relationships exist among these factors?

RQ3. How can the quantitative patterns regarding these factors be interpreted in light of the institutional experiences and perspectives reported by participants?

By focusing on decision-making in the management of teaching activities in blended learning rather than on student outcomes alone, the study seeks to extend current understanding of blended learning implementation and to provide evidence relevant to the management of digital transformation in higher education.

RESEARCH METHOD

This study employed a quantitatively driven design, with interview data used to support the interpretation of selected quantitative findings, consistent with mixed methods research designs in which qualitative data are used to complement and clarify a quantitatively dominant strand (Hanson et al., 2005). The study focused on the factors affecting decision-making in the management of teaching activities in blended learning within Vietnamese higher education. The quantitative component served as the principal source of evidence, whereas the qualitative interview data were used to clarify key quantitative patterns.

The study was conducted at four higher education institutions in Ho Chi Minh City, Vietnam. The survey participants consisted of 338 lecturers, including 59 lecturers who concurrently held managerial positions. These participants were selected because they were directly involved in teaching activities in blended learning and were therefore in a position to evaluate the factors influencing decision-making in the management of such activities. A purposive sampling technique was used to recruit participants with direct experience in blended learning implementation and, in the case of lecturers holding managerial positions, experience in teaching-related management.

To support the interpretation of the quantitative findings, qualitative data were collected from 12 interview participants, including 8 lecturers holding managerial positions and 4 lecturers without managerial roles. These participants were selected to provide institutionally grounded explanations for the quantitative patterns, particularly those related to policy conditions, stakeholder awareness, technological readiness, and managerial capacity in the management of teaching activities in blended learning.

Quantitative data were collected using a structured questionnaire consisting of two main parts. The first part gathered demographic information, including gender, academic degree, academic rank, managerial position, institutional affiliation, and years of experience. The second part focused on perceptions related to blended learning and the management of teaching activities in blended learning. For the purposes of this article, the analysis concentrated on the section measuring the perceived influence of eight factors on decision-making in the management of teaching activities in blended learning. These eight factors were ICT development, policy conditions, legal and intellectual property issues related to digital learning materials, technological infrastructure, managers' awareness, lecturers' awareness, students' awareness, and managers' organizational capacity. Each factor was measured on a five-point Likert scale ranging from 1 = not influential at all to 5 = very influential. The use of single-item measures was considered appropriate for this study because the examined factors were predefined, concrete, and context-specific conditions rather than reflective multi-item latent constructs. The purpose of the analysis was not to validate a new psychometric scale, but to examine respondents' perceived influence of clearly identified factors on decision-making in the management of blended learning teaching activities. Therefore, internal consistency reliability testing such as Cronbach's alpha was not applicable. Nevertheless, single-item measurement was treated with caution, and the findings are interpreted as evidence of perceived influence rather than as results derived from validated latent constructs (Cho, 2016; Diamantopoulos et al., 2012).

The qualitative data were collected using semi-structured interview guides for lecturers and lecturers holding managerial positions. The interview questions addressed institutional policy, contextual influences, infrastructure conditions, stakeholder awareness, managerial practices, and the use of learning results and student feedback in the management of teaching activities in blended learning. These data were not intended to form an independent qualitative strand; instead, they were used to provide explanatory support for selected quantitative results.

Data collection was carried out in two stages. First, the questionnaires were distributed to lecturers in the selected institutions, including those who concurrently held managerial positions. Participation was voluntary, and all respondents were informed that the data would be used solely for academic purposes. Second, interviews were conducted with the 12 selected participants who had direct experience with teaching and teaching-related management in blended learning contexts. The qualitative data were retained for explanatory use during the interpretation of the quantitative findings.

The quantitative data were screened, coded, and entered into IBM SPSS Statistics 27.0 for analysis. The analysis was conducted in three stages. First, descriptive statistics were used to calculate the mean scores and standard deviations of the eight factors in order to determine their perceived levels of influence. Second, Pearson correlation analysis was performed to examine the relationships among these factors. Third, multiple regression analysis was conducted to examine the independent effects of the identified factors on

decision-making in the management of teaching activities in blended learning. In addition, the variance inflation factor (VIF) was used to assess potential multicollinearity among the independent variables.

After the quantitative analysis had been completed, the interview data were reviewed to interpret selected quantitative patterns, particularly those related to the prominence of policy conditions, stakeholder awareness, technological readiness, managerial capacity, and the interdependence among the examined factors. Rather than being presented as a separate qualitative findings strand, these data were incorporated into the results and discussion to strengthen the interpretation of the quantitative findings. All participants took part voluntarily, were informed about the academic purpose of the study, and were assured that confidentiality would be maintained throughout the data collection and reporting process.

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistics indicated that all eight examined factors were perceived as highly influential in decision-making in the management of teaching activities in blended learning. Mean scores ranged from 4.05 to 4.29, suggesting that respondents generally regarded all factors as important. Among these factors, policy conditions received the highest mean score, whereas lecturers' awareness of the importance of teaching activities in blended learning received the lowest, although it still remained within the high range. The overall mean score was 4.18, indicating a consistently high perceived level of influence across the eight factors.

Table 1. Descriptive statistics of factors affecting decision-making in the management of teaching activities in blended learning (n=338)

Codes	Factors	Mean (M)	SD
1	ICT development	4.18	.52
2	Policy conditions	4.29	.52
3	Legal and intellectual property issues related to digital learning materials	4.10	.51
4	Technological infrastructure conditions	4.18	.52
5	Managers' awareness of the importance of teaching activities in blended learning	4.28	.50
6	Lecturers' awareness of the importance of teaching activities in blended learning	4.05	.49
7	Students' awareness of the importance of teaching activities in blended learning	4.19	.51
8	Managers' capacity to organize and manage teaching activities in blended learning	4.20	.55
Overall		4.18	.52

As shown in Table 1, all eight factors obtained mean scores above 4.00. The highest mean was recorded for policy conditions (M = 4.29, SD = 0.52), followed

by managers' awareness of the importance of teaching activities in blended learning ($M = 4.28$, $SD = 0.50$). By contrast, lecturers' awareness of the importance of teaching activities in blended learning received the lowest mean score ($M = 4.05$, $SD = 0.49$), although this value still indicated a high perceived level of influence. Standard deviations ranged from 0.49 to 0.55, suggesting relatively limited dispersion in responses.

These findings indicate that respondents generally regarded institutional, technological, legal, and human conditions as important to decision-making in the management of teaching activities in blended learning. The ranking pattern also suggests that policy-related and managerial conditions were perceived as slightly more salient than the remaining dimensions.

Pearson Correlation Analysis

The correlation matrix revealed that all eight examined factors were positively and significantly related to one another. Correlation coefficients ranged from 0.510 to 0.668, indicating moderate to relatively strong positive relationships. This pattern suggests that respondents did not perceive the examined factors as isolated conditions, but rather as interrelated aspects of decision-making in the management of teaching activities in blended learning.

Table 2. Pearson correlation matrix of factors affecting decision-making in the management of teaching activities in blended learning

Codes		1	2	3	4	5	6	7	8
1	r	1	.576**	.643**	.587**	.612**	.620**	.620**	.628**
	Sig.		.000	.000	.000	.000	.000	.000	.000
2	r	.576**	1	.552**	.510**	.526**	.537**	.558**	.599**
	Sig.	.000		.000	.000	.000	.000	.000	.000
3	r	.643**	.552**	1	.588**	.525**	.617**	.521**	.637**
	Sig.	.000	.000		.000	.000	.000	.000	.000
4	r	.587**	.510**	.588**	1	.510**	.563**	.541**	.587**
	Sig.	.000	.000	.000		.000	.000	.000	.000
5	r	.612**	.526**	.525**	.510**	1	.541**	.606**	.668**
	Sig.	.000	.000	.000	.000		.000	.000	.000
6	r	.620**	.537**	.617**	.563**	.541**	1	.614**	.599**
	Sig.	.000	.000	.000	.000	.000		.000	.000
7	r	.620**	.558**	.521**	.541**	.606**	.614**	1	.607**
	Sig.	.000	.000	.000	.000	.000	.000		.000
8	r	.628**	.599**	.637**	.587**	.668**	.599**	.607**	1
	Sig.	.000	.000	.000	.000	.000	.000	.000	

Note. $p < .01$ for all off-diagonal coefficients.

As reported in Table 2, all correlations were positive and statistically significant at the 0.01 level. The strongest correlation was found between

managers' awareness of the importance of teaching activities in blended learning and managers' capacity to organize and manage teaching activities in blended learning ($r = 0.668$, $p < 0.01$). Other relatively strong associations included the relationships between legal and intellectual property issues related to digital learning materials and managers' capacity to organize and manage teaching activities in blended learning ($r = 0.637$, $p < 0.01$), between ICT development and managers' capacity to organize and manage teaching activities in blended learning ($r = 0.628$, $p < 0.01$), and between lecturers' awareness of the importance of teaching activities in blended learning and students' awareness of the importance of teaching activities in blended learning ($r = 0.614$, $p < 0.01$).

These results indicate that the examined factors were perceived as closely interconnected rather than as independent influences. The positive and significant coefficients suggest that respondents tended to regard these factors as mutually related conditions shaping decision-making in the management of teaching activities in blended learning.

Multiple Regression Analysis

The regression model indicated that none of the eight examined factors demonstrated a statistically significant independent effect on decision-making in the management of teaching activities in blended learning when entered simultaneously into the model. The model explained only a very small proportion of variance, and the overall regression model was not statistically significant. These findings suggest that, although all factors were perceived as influential and positively interrelated, none emerged as a distinct independent predictor.

Table 3. Multiple regression results for factors affecting decision-making in the management of teaching activities in blended learning

Codes	B	Beta	t	Sig.	VIF
1	.030	.102	1.183	.237	2.483
2	-.011	-.036	-.478	.633	1.896
3	-.009	-.031	-.374	.709	2.277
4	-.005	-.016	-.215	.830	1.932
5	-.030	-.098	-1.219	.224	2.175
6	-.006	-.018	-.217	.828	2.197
7	.043	.139	1.710	.088	2.200
8	-.009	-.032	-.363	.717	2.631

Note. Model summary: $R^2 = .017$; Adjusted $R^2 = -.007$; $F(8, 329) = 0.714$; $p = .679$.

As shown in Table 3, none of the factors reached statistical significance at the 0.05 level. The standardized beta coefficients ranged from $\beta = -0.098$ to $\beta = 0.139$. The largest standardized coefficient was observed for students' awareness of the importance of teaching activities in blended learning ($\beta = 0.139$, $p = 0.088$), although this effect did not reach conventional statistical significance. The remaining factors also yielded non-significant coefficients, with p values above 0.05. In addition, the VIF values ranged from 1.896 to 2.631, indicating that multicollinearity was not severe. This pattern suggests that although the eight

factors were jointly perceived as important and significantly interrelated, no single factor stood out as an independent predictor when the full set of variables was entered simultaneously into the model. The qualitative findings presented below were used to clarify this result.

Qualitative findings

In the qualitative findings reported below, interview participants who were lecturers holding managerial positions were coded as MI, whereas lecturers without managerial roles were coded as LI.

The interview data broadly supported the quantitative results by showing that participants viewed decision-making in the management of teaching activities in blended learning as shaped by multiple interrelated conditions rather than by a single dominant factor. Four themes were especially evident.

First, the qualitative findings helped explain why policy conditions received the highest mean score in the quantitative results. Policy-related issues were repeatedly described as central to management decisions. Seven of the eight managerial interviewees and all four lecturer interviewees referred explicitly to policy, regulations, or institutional guidance as influential conditions in managing teaching activities in blended learning (MI2-MI8; LI1-LI4). One interviewee stated that *"In my view, policy factors and managerial capacity are the most important. In addition, lecturers' technological competence and infrastructural support also considerably affect management effectiveness"* (MI2). Another participant similarly emphasized that implementation remained strongly dependent on institutional direction and clearer higher-level guidance (MI3). From the lecturers' side, one interviewee observed that *"guiding documents on teaching activities in blended learning at school/faculty level are not clear and binding enough"* (LI1). These accounts are consistent with the quantitative result that policy conditions were perceived as the most influential factor.

Second, the qualitative findings clarified why lecturers' awareness of the importance of teaching activities in blended learning received the lowest mean score among the eight factors, although it still remained at a high level. Three of the eight managerial interviewees and three of the four lecturer interviewees referred explicitly to differences in lecturers' readiness, awareness, technological competence, or willingness to change as important conditions affecting management (MI6, MI7, MI8; LI1, LI3, LI4). One interviewee noted that *"The awareness and readiness for change of lecturers and students are also influential factors"* (MI6). Similarly, one lecturer interviewee reported that *"Some lecturers were still unfamiliar with the LMS and even forgot their account passwords"* (LI1). These accounts indicate that lecturers' awareness was linked not only to recognition of the importance of blended learning, but also to practical preparedness for implementation.

Third, the qualitative data reinforced the correlation results by showing that the examined factors were often experienced as mutually connected. Participants rarely treated one condition as isolated from the others. Instead, they consistently referred to linked conditions such as policy support, technological

infrastructure, stakeholder awareness, and organizational capability. Five of the eight managerial interviewees and three of the four lecturer interviewees described the factors as operating together rather than separately (MI1, MI3, MI5, MI6, MI8; LI1, LI2, LI3). One interviewee explained that *“When stakeholders clearly understand the goals and benefits of blended learning, issuing and implementing policies and regulations becomes more favorable”* (MI5). Another lecturer interviewee similarly argued that the development of science and technology, together with policy, influenced most of the remaining conditions (LI2). These accounts align with the quantitative finding that the examined factors were significantly interrelated.

Fourth, the qualitative findings helped explain why the regression model did not identify any statistically significant independent predictor. Participants rarely treated one factor as solely decisive. Instead, they repeatedly referred to combinations of policy direction, infrastructure, lecturers’ readiness, students’ adaptation, and institutional support. Four of the eight managerial interviewees explicitly emphasized that effective management depended on the coordinated operation of several conditions rather than on one dominant factor (MI1, MI3, MI5, MI8). One interviewee remarked that *“The school’s current technological infrastructure is still not optimal; if teaching activities in blended learning are to be implemented effectively, stable servers and a user-friendly LMS are essential”* (MI1). Another stated that when awareness, infrastructure, technological development, and organizational capacity were addressed in a coordinated way, management became more feasible and effective in practice (MI5). These accounts suggest that decision-making in the management of teaching activities in blended learning was perceived as shaped by an interdependent configuration of conditions whose separate effects were difficult to isolate statistically.

The qualitative findings therefore complemented the quantitative results by showing that the examined factors were perceived not as isolated influences but as interdependent conditions shaping decision-making in the management of teaching activities in blended learning.

Taken together, the quantitative and qualitative findings suggest that decision-making in the management of teaching activities in blended learning was shaped by a set of highly rated, positively interrelated, and practically interconnected conditions, rather than by any single dominant factor.

Discussion

The perceived extent of influence of the identified factors

The first research question asked to what extent the identified factors were perceived to influence decision-making in the management of teaching activities in blended learning within Vietnamese higher education. The findings indicate that all eight factors were perceived as highly influential, with mean scores ranging from 4.05 to 4.29 and an overall mean of 4.18. This pattern suggests that respondents did not view decision-making in blended teaching management as dependent on a narrow set of classroom-level concerns. Instead, they understood it as an institutional process shaped by organizational, technological, legal, and

human conditions operating simultaneously. This interpretation is consistent with literature portraying blended learning as an institutional and systemic undertaking rather than a simple instructional adjustment (Anthony Jr et al., 2022; Galvis, 2018; OECD, 2023).

Among the eight factors, policy conditions received the highest mean score, indicating that respondents regarded institutional regulations, formal guidance, and policy direction as the strongest conditions shaping managerial action in blended learning contexts. This finding aligns closely with Ali and Georgiou (2025), who conceptualized the institutional adoption and diffusion of blended learning as a staged process requiring strategic direction, organizational support, and routinization over time. It is also consistent with OECD's (2023) ecosystem perspective, which stresses that digital education depends on coherent governance, aligned institutional structures, and implementation capacity rather than on technology acquisition alone. In the Vietnamese context, this reading is further supported by Le (2024) and Le et al. (2025), both of whom highlighted the central role of national and institutional policy in advancing higher education digitalization and blended learning development.

The relatively high ratings for ICT development and technological infrastructure conditions further indicate that respondents perceived digital readiness as a foundational condition for effective decision-making. This is consistent with Adekola et al. (2017), who argued that successful transitions into enhanced blended learning require a holistic institutional framework rather than piecemeal technological changes. Similarly, Mohammadi et al. (2025) emphasized that platform quality, technical arrangements, and teacher support are essential to sustaining students' motivation and blended learning effectiveness. In the present study, these technological conditions were not treated as background supports but as practical preconditions for the management of teaching activities in blended learning.

The awareness-related findings are equally revealing. Although managers' awareness and students' awareness were both rated highly, lecturers' awareness received the lowest mean score among the eight factors, even though it still remained within the high range. This pattern should not be interpreted simply as reluctance on the part of lecturers. A more plausible explanation is that lecturers occupy the most demanding implementation position, because they must translate institutional direction into day-to-day teaching practice while simultaneously adapting pedagogical routines, digital practices, and interaction with students. This interpretation is consistent with Kieu et al. (2024), who documented Vietnamese lecturers' concerns about blended learning implementation, including uncertainty, technological strain, and dependence on institutional support. It also aligns with research showing that blended learning adoption is shaped by readiness, self-efficacy, behavioral intention, and perceived support among users and implementers (Hamad et al., 2024; Hossain et al., 2024; Nguyen & Tran, 2025).

The relatively high score for managers' organizational capacity suggests that respondents regarded leadership capability as another major condition for

effective decision-making. This result is theoretically coherent because blended learning requires more than policy and infrastructure; it also requires the organizational ability to coordinate resources, support staff, sustain implementation, and respond to emerging problems. Previous studies have similarly stressed that institutional leadership and structured support are central to successful blended learning adoption and diffusion in higher education (Adekola et al., 2017; Ali & Georgiou, 2025; Mohammadi et al., 2025).

Finally, the high rating of legal and intellectual property issues related to digital learning materials indicates that respondents did not regard copyright, licensing, and compliance as peripheral concerns. Instead, these issues appear to have been understood as part of the broader managerial environment in which decisions about blended teaching are made. This interpretation is consistent with Mezei (2023), who showed that digital higher education increasingly involves legal questions concerning access to, use of, and sharing of protected materials in online and hybrid environments. Taken together, the findings for RQ1 suggest that respondents perceived managerial decision-making in blended learning as strongly influenced by a broad constellation of interdependent institutional conditions rather than by a single dominant domain.

Relationships among the identified factors

The second research question examined what relationships existed among the identified factors. The correlation analysis showed that all eight factors were positively and significantly related, with coefficients ranging from .510 to .668. This pattern indicates that respondents did not perceive policy, infrastructure, awareness, legal concerns, and managerial capacity as isolated influences. Instead, they viewed them as closely interconnected conditions within the same managerial process.

This result is strongly consistent with prior literature that conceptualizes blended learning as a multi-dimensional institutional phenomenon. Galvis (2018) argued that decision-making in blended learning should be understood through linked educational, operational, and organizational dimensions. Likewise, Anthony Jr et al. (2022), in their systematic review, concluded that blended learning adoption and implementation in higher education are shaped by interacting factors associated with students, lecturers, and administration. OECD (2023) similarly framed digital education as an ecosystem in which governance, infrastructure, digital tools, and human capability must operate together. From that perspective, the consistent positive correlations in the present study are theoretically coherent because they reflect the interdependence of the institutional conditions surrounding blended teaching management.

The relationships among the factors also suggest that respondents tended to view improvements in one domain as being linked to improvements in others. For example, stronger policy conditions were associated with stronger perceptions of infrastructure, awareness, and managerial capacity. This may indicate that respondents saw policy not merely as a formal requirement, but as a condition that enables other aspects of blended learning management to function more

effectively. Clearer regulations and institutional guidance may strengthen managerial confidence, facilitate staff coordination, and create more favorable conditions for infrastructure investment and implementation support. This reading is consistent with Ali and Georgiou (2025), who showed that institutional adoption and diffusion of blended learning depend on connected stages of development rather than isolated actions.

The strongest association in the present study was found between managers' awareness and managers' organizational capacity. This relationship is conceptually meaningful because it implies that respondents perceived leadership understanding and leadership capability as interdependent. In practice, managerial awareness without the capacity to coordinate staff, allocate resources, and implement institutional direction is unlikely to result in effective action. Conversely, organizational capacity without awareness of the significance of blended teaching is equally unlikely to support coherent decision-making. This interpretation fits broader higher education research showing that institutional decisions are shaped not only by formal authority, but also by organizational context, evidence use, and the ability to mobilize support across the institution (Thiedig & Wegner, 2024).

The positive correlations involving lecturers' awareness, students' awareness, and technological infrastructure are also noteworthy. These relationships suggest that respondents did not view stakeholder readiness as separable from technological conditions. Instead, readiness appears to have been understood as partly dependent on the technological environment in which blended teaching takes place. When infrastructure is perceived as reliable and supportive, lecturers and students may be more likely to adapt to blended learning practices. Conversely, where systems are unstable or support is weak, awareness alone may not translate into effective implementation. This interpretation aligns with Kieu et al. (2024), who linked lecturers' concerns to institutional support conditions, and with Mohammadi et al. (2025), who emphasized the role of platforms and teacher support in improving blended learning effectiveness.

The positive associations involving legal and intellectual property issues related to digital learning materials are equally important. These results suggest that respondents did not regard legal concerns as detached from the practical management of blended learning. Instead, legal awareness appears to have been perceived as connected to policy, infrastructure, and organizational capacity. In practice, decisions about digital learning materials often involve institutional rules, platform usage, access arrangements, and questions of copyright or content sharing. This reading is consistent with Mezei's (2023) argument that digital higher education increasingly requires institutions to manage copyright and lawful content use as part of broader educational strategy.

Overall, the findings for RQ2 indicate that the identified factors were perceived as mutually reinforcing rather than independent influences. In the Vietnamese higher education context, this suggests that decision-making in the management of teaching activities in blended learning takes place within a tightly connected institutional environment in which governance, infrastructure,

stakeholder readiness, legal awareness, and leadership capability are understood to operate together rather than separately.

Interpreting the quantitative patterns in light of participants' institutional experiences

The third research question asked how the quantitative patterns could be interpreted in light of the institutional experiences and perspectives reported by participants. This question is especially important because the quantitative results revealed a distinctive pattern: all eight factors were rated highly, and all were significantly interrelated, yet none showed a statistically significant independent effect in the regression model when entered simultaneously. Rather than indicating that the factors are unimportant, this pattern suggests that decision-making in the management of teaching activities in blended learning is perceived as a jointly conditioned process in which several institutional conditions operate together. This interpretation is consistent with the present correlation findings and with prior work emphasizing that blended learning implementation is shaped by interacting institutional and human conditions rather than one isolated determinant (Adekola et al., 2017; Ali & Georgiou, 2025; Anthony Jr et al., 2022).

The qualitative findings strongly reinforce this interpretation. Participants consistently described decision-making as dependent on combinations of policy direction, technological infrastructure, stakeholder readiness, and managerial coordination. For example, one managerial participant stated that *"In my view, policy factors and managerial capacity are the most important. In addition, lecturers' technological competence and infrastructural support also considerably affect management effectiveness"* (MI2). Another participant observed that *"When stakeholders clearly understand the goals and benefits of blended learning, issuing and implementing policies and regulations becomes more favorable"* (MI5). Similarly, one interviewee emphasized that stable servers and a user-friendly LMS were essential for effective implementation (MI1), while a lecturer noted that some colleagues were still unfamiliar with the LMS and even forgot their account passwords (LI1). These accounts do not point to a single dominant factor; rather, they reveal a configurational institutional reality in which multiple conditions interact in practice. This is closely aligned with Ali and Georgiou's (2025) account of institutional diffusion as a staged and negotiated process, and with OECD's (2023) ecosystem perspective, which emphasizes coordinated alignment across policy, infrastructure, and human capability.

A further explanation concerns the scope of the phenomenon under study. Many previous studies that identify significant predictors focus on individual adoption, behavioral intention, or acceptance of blended learning among students or teachers (Hamad et al., 2024; Hossain et al., 2024; Nguyen & Tran, 2025). By contrast, the present study examined decision-making in the management of teaching activities in blended learning, which is broader, more collective, and more institutionally embedded. This distinction matters because institutional decision-making typically depends on the alignment of several conditions at once, including policy, infrastructure, support systems, and leadership capability. Seen

in this light, the absence of statistically significant independent effects does not contradict the descriptive findings; rather, it clarifies that respondents perceived the examined factors as important precisely because they form part of an interdependent decision environment. This interpretation is also consistent with Thiedig and Wegner's (2024) scoping review, which showed that decision-making in higher education is shaped by multiple interacting forms of evidence and contextual influences rather than by single linear drivers.

The qualitative findings also help explain why such interdependence may be especially salient in the Vietnamese higher education context. Participants repeatedly referred to implementation difficulties arising when institutional guidance was unclear, infrastructure was insufficient, or lecturers and students were unevenly prepared for blended learning. These accounts are consistent with Vietnamese studies showing that blended learning implementation remains closely tied to institutional support, professional development, and broader digital transformation efforts (Kieu et al., 2024; Le, 2024; Le et al., 2025). They also align with broader reviews suggesting that challenges in blended learning are often layered across policy, infrastructure, digital competence, and support arrangements rather than confined to one domain alone (Mohammadi et al., 2025; Sareen & Mandal, 2024).

A final consideration concerns measurement and model interpretation. The non-significant regression results should be interpreted critically rather than simply as a lack of influence. The small explanatory power of the regression model indicates that the examined factors did not function as independent linear predictors when entered simultaneously. This may be partly because the factors were conceptually broad and empirically interrelated, and partly because decision interpreted critically rather than simply as a lack of influence. The small explanatory power of the regression model indicates that the examined factors did not function as independent linear predictors when-making in blended learning management is a collective and institutionally embedded process. In addition, because the eight factors were operationalized as single-item variables rather than multi-item latent constructs, the model may have had limited precision in statistically separating broad constructs such as policy conditions, organizational capacity, and stakeholder awareness. Accordingly, the absence of statistically significant regression coefficients should be interpreted cautiously and in relation to the full pattern of evidence rather than as a standalone finding. This interpretation cautions against a simple "strongest predictor" logic and supports a systemic understanding in which policy, infrastructure, stakeholder awareness, legal considerations, and managerial capacity operate together as mutually reinforcing conditions.

Overall, the discussion provides a coherent answer to the study's three research questions. First, all eight identified factors were perceived as highly influential, with policy conditions emerging as the strongest perceived influence. Second, the factors were positively and significantly interrelated, indicating that respondents viewed them as components of a connected managerial environment rather than separate influences. Third, the combined quantitative and qualitative

evidence suggests that these factors operate in an interdependent way, which helps explain why none emerged as an independent predictor in the regression model. In the Vietnamese higher education context, decision-making in the management of teaching activities in blended learning is therefore best understood as a systemic process requiring alignment across governance, infrastructure, stakeholder readiness, legal awareness, and managerial capacity.

Although the study was conducted in Vietnamese higher education, its implications extend beyond the national context. Many higher education systems, particularly in developing or transitional contexts, face similar challenges in moving from fragmented digital adoption toward more sustainable blended learning governance. The findings suggest that universities should not approach blended learning management as a purely technological issue. Instead, effective decision-making requires alignment among policy guidance, infrastructure, legal clarity, stakeholder readiness, and managerial capacity. This contributes to the broader international literature by showing that blended learning governance may depend less on isolated predictors and more on the coordinated operation of institutional conditions.

CONCLUSION

This study examined the factors affecting decision-making in the management of teaching activities in blended learning within Vietnamese higher education. Based on survey data from 338 lecturers and interview data from 12 participants, the findings show that all eight examined factors were perceived as highly influential, with policy conditions emerging as the strongest perceived influence and lecturers' awareness receiving the lowest mean score, although still within the high range. The results also indicate that the factors were positively and significantly interrelated, while none showed a statistically significant independent effect in the regression model. Taken together, these findings suggest that decision-making in the management of teaching activities in blended learning is not shaped by a single dominant determinant, but by the combined operation of institutional, technological, legal, human, and managerial conditions. The central conclusion of this study is therefore that blended learning management should be understood as a systemic and institutionally embedded process requiring coordinated action across multiple levels of the university. In practical terms, universities should strengthen blended learning management by clarifying policy guidelines, improving technological infrastructure, supporting lecturers' readiness for change, raising stakeholder awareness, addressing legal and intellectual property issues related to digital learning materials, and reinforcing managerial capacity to organize and sustain blended teaching practices. Since the examined factors were operationalized as single-item variables, future research should develop and validate multi-item scales and examine these factors across broader institutional contexts.

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Conflicts of interest

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