

## AN INVESTIGATION INTO THE IMPLEMENTATION OF BLENDED LEARNING AT ECONOMICS UNIVERSITIES IN HANOI

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**Abstract.** The research was conducted to investigate the implementation of blended learning at economics universities in Hanoi. In this research, questionnaires were delivered to students through Google Forms and SPSS was utilized to analyze the data. The results of the research indicated that the application of blended learning in economics universities is effective but there are some aspects such as interaction and outcomes that need to be improved. Therefore, the researchers suggest viable proposals for students, lecturers, and management boards on how to improve the effectiveness of blended learning's integration into teaching and learning at economics universities in Hanoi.

**Keywords:** Blended learning, evaluation, economics universities.

### 1. Introduction

Thanks to significant breakthroughs in science and technology, information and communication technologies (ICTs) are developing quickly. Along with the rapid improvements in ICT, many new learning-teaching theories, models, and approaches have been proposed to optimize the efficiency of technological information usage in the delivery of instruction. During the COVID-19 outbreak, many teaching methods have been proposed and put into application, and blended learning is considered as one of the most feasible ways for schools and universities. Although the blended approach seems to be welcomed in Western cultures, Asian countries may have little preference for this learning approach because of some challenges such as insufficient knowledge about implementation, different cultural backgrounds, and different attitudes towards the approach (Tham & Tham, 2011) [1]. Thus, there is little research about evaluating the integration of blended learning into teaching and studying in universities in Asia, especially in Vietnam. In fact, six economic universities including National Economics University (NEU), Foreign Trade University (FTU), Vietnam National University - University of Economics and Business (UEB), Thuongmai University (TMU), Banking Academy (BA), Academy of Finance (AOF) have applied this approach in their studying and teaching. However, due to its nature as a very new learning method in Vietnam, it has aroused a lot of controversy. This study aims to contribute to this gap.

In the early studies on blended learning, it was commonly seen that there was an ambiguity in the definitions of this blended approach. Singh & Reed (2001) [2] acknowledged that “blended learning focuses on optimizing achievement of learning objectives by applying the “right” learning technologies to match the “right” personal learning style to transfer the “right” skills to

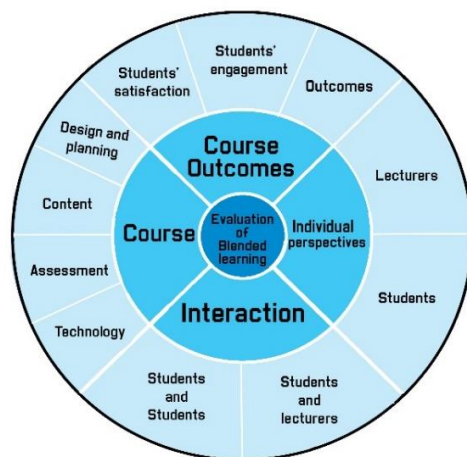
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the “right” person at the “right” time”. However, this definition seems to focus on the outcome of “optimizing achievement of learning objectives” rather than the delivery method. Osguthorpe, R. T., & Graham, C. R. (2003) [3] indicated the advancement in their definition of blended learning as a combination of face-to-face environment with distance delivering systems. Likewise, Rothery, A. (2004) [4] confirmed that blended learning was also an integration of online and face-to-face modalities and the authors put an emphasis on the main role of Internet-based technology in this blended method. In some cases, blended learning is defined based on the proportion of online parts in content. For instance, Allen and his colleagues (2007) [5] claimed that the course considered as blended learning had to contain between 30% and 79% of content delivered online. Recently, this term is increasingly used to refer to the integration of online and face-to-face learning and teaching (Picciano et al, 2013) [6].

There have been numerous studies evaluating the impact of blended learning on multiple factors such as engagement, enthusiasm, accomplishment, mood, cooperation, information acquisition, analytical skills, and the drop-out ratio of risk students. According to Akgunduz, D. & Akinoglu, O. (2016) [7], the adoption of blended learning helped students have a more positive attitude toward the science class and enhance their self-regulation skills. Moreover, some studies tried to establish common knowledge, expertise, and understanding of the new administration, teaching, and preparation whilst making sure the requisite technologies and facilities have been set in place, which changed the mentalities and attitudes of teaching staff toward blended learning (Şentürk, C., 2021) [8], student teachers’ attitudes toward blended learning (Birbal, 2018) [9]. Meanwhile, Nguyen, T. T. H (2018) [10] indicated that there are five factors that affect students’ learning success in blended courses in tertiary education: student factor; instructor factor; institution factor; design factor; other factors (educational and monetary resources; culture-related factors). Besides, there are numerous studies about methods of evaluating blended learning programs. These are different in some aspects such as their viewpoints, methods, and criteria... However, in general, these evaluations would relate to the assessment of course outcomes, measures of students’ satisfaction, and student engagement.



**Figure 1. Proposed framework for evaluating the implementation of blended learning**

(Source: From the researchers)

Based on these elements, some frameworks to evaluate the integration of blended learning were proposed such as the Conceptual framework for evaluating blended learning (Bowyer, J., & Chambers, L., 2017) [11] with elements such as situation, course organization, individual perspective, outcomes or framework in Illinois Online Network (2018) [12] with instructional

design, communication, interaction and collaboration, students' evaluation and assessment, learner support and resources aspects. After reviewing related studies about evaluating the integration of blended learning, the researchers decided to inherit the framework "Conceptual framework for evaluating blended learning", which seems to cover all aspects to evaluate blended learning. However, it was adjusted in this research to investigate the implementation of blended learning in economics universities in Hanoi.

## **2. Content**

### **2.1. Research methods**

#### **2.1.1. Data collection methods**

##### **2.1.1.1. Desk-research method**

The researchers used existing and publicly available data from published documents and research papers. This method is necessary to provide baseline information in understanding the evaluation of blended learning, and then propose the most appropriate framework for the research.

##### **2.1.1.2. Questionnaire survey method**

- Designing questionnaire

The questionnaire consists of three main parts:

Part 1: Close questions about the demographic information of the respondents: gender, university, major, and the number of blended courses that economics students took.

Part 2: Likert 5 scales to evaluate the effectiveness of blended learning integration such as students' satisfaction, students' engagement, course outcome, design and planning, interaction...

Part 3: Open questions about solutions to improve the effectiveness of blended learning.

- A pilot study

The questionnaire was sent to a group of 15 students and 90% of the respondents clearly showed that the questionnaire covers numerous important aspects of blended learning that contribute to the research results. Based on their comments, the researchers adjusted the questionnaire to have the final one for the mass survey.

- Mass survey with online questionnaires

This survey was conducted in the form of online questionnaires via Google Docs forms for one week. Participants were students from six economic universities in Hanoi including National Economics University (NEU), Foreign Trade University (FTU), Vietnam National University - University of Economics and Business, Thuongmai University (TMU), Banking Academy (BA), Academy of Finance (AFO). There were 114 students from NEU, 60 students from TMU, 52 from BA, 66 from FTU, 56 from UEB, and 53 from AOF.

#### **2.1.2. Data processing methods**

##### **2.1.2.1. Calculating mean attitude using SPSS**

SPSS was used to calculate the mean of students' measure on different aspects and then proposed the Likert scale of 5 to evaluate their overall opinions: "Strongly disagree" (1.00-1.80), "Disagree" (1.81-2.60), "Neutral" (2.61-3.40), "Agree" (3.41-4.20), "Strongly agree" (4.21-5.00).

#### **2.1.3. Evaluation of the course outcomes**

**Table 1. Descriptive statistics of students' satisfaction**

	<b>Statements</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
LS1	Overall, I am satisfied with the blended learning approach.	401	1	5	3.62	.952

LS2	The online activities offer me opportunities in different ways from the classroom.	401	1	5	3.33	1.030
LS3	The blended learning environment holds my interest throughout the courses.	401	1	5	3.19	1.080
LS4	I can learn more in this blended learning environment.	401	1	5	3.45	1.033
LS5	I feel more comfortable when attending online lessons rather than in the classroom.	401	1	5	3.51	1.152
LS6	Blended learning is more convenient than in the classroom.	401	1	5	3.80	.986
LS7	Blended learning offers me more flexibility.	401	1	5	3.77	.973
LS8	Blended learning allows me to make more efficient use of my time.	401	1	5	3.87	.983
LS9	Given the opportunity, I would take other blended learning courses in the future.	401	1	5	3.61	.984

An important course outcome that cannot be measured through attendance and assessment data is students' satisfaction. Whilst a researcher or lecturer might consider a course to be successful if students meet or exceed expectations in assessment, learners' satisfaction is important because it accounts for students' personal experiences of the course. The table reveals that students agree with LS8 (mean = 3.87). Moreover, LS6 and LS7 also gain a lot of agreement from students with the means of 3.80 and 3.77 mean respectively. However, economics undergraduates are less likely to agree with LS3 (mean = 3.19) and they seem to have different opinions about LS5 (deviation >1). In general, economics students are quite satisfied with blended learning (mean = 3.62). Statistics also indicate that they are willing to take another blended course if given the opportunity (mean = 3.61). It means that they are likely to recognize its benefits and willing to try this learning approach in the future.

***Table 2. Descriptive statistics of students' engagement***

	<b>Statements</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
SE1	I attend online lectures regularly	401	1	5	3.83	1.002
SE2	I pay attention to the lessons provided by lecturers	401	1	5	3.22	.971
SE3	I am interested in this blended learning environment	401	1	5	3.35	.988
SE4	I actively participate in class activities with enthusiasm	401	1	5	3.29	.968
SE5	I meet all the assignment requirements	401	1	5	3.64	.954

Measuring students' engagement allows a more complex analysis of students' experience and learning than simply investigating course outcomes. Regarding economics students' engagement in blended classes, the majority of the statements in the table gain agreement from the respondents. Out of five statements, SE1 takes the highest mean of 3.83, which is followed by SE5 with 3.64. However, the respondents also show neutral opinions with SE2 but the figures are the lowest compared with others (mean = 3.22). It can be concluded that students in economics universities are actively involved in blended classes.

**Table 3. Descriptive statistics of students' course outcomes**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
CO1	I am satisfied with my final grades in the course	401	1	5	3.43	1.037
CO2	I am able to achieve all the learning objectives at the end of the courses	401	1	5	3.32	.905
CO3	My understanding is improved compared to similar classes I studied before	401	1	5	3.35	.937
CO4	The use of blended learning technology encourages me to learn independently	401	1	5	3.64	.923
CO5	Blended learning makes me stay alert and more focused.	401	1	5	3.22	1.058
CO6	Blended learning promotes my creativity and intellectual curiosity	401	1	5	3.45	.999
CO1	I am satisfied with my final grades in the course	401	1	5	3.43	1.037

When it comes to course outcomes, CO4 is approved by the majority of economics students (mean = 3.64). Furthermore, students also show agreement with CO6 and CO1 (mean = 3.45, 3.43 respectively). Regarding CO2, and CO3, most students show "neutral" opinions with the figures recorded at 3.32, and 3.35, respectively. The last figure is witnessed in CO5 (mean = 3.22). In conclusion, the introduction of blended learning to course outcomes can lead to improved course outcomes; however, some aspects, of course, outcomes seem not to be improved significantly after the integration of blended learning.

#### **2.1.4. Evaluation of courses**

**Table 4. Descriptive statistics of design and planning**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
DP1	There is a good balance between online and classroom activities.	401	1	5	3.55	.989
DP2	Online and classroom activities work very well.	401	1	5	3.43	.930
DP3	The learning objectives are clearly stated in the course syllabus.	401	1	5	3.62	.920

DP4	The organization of lessons is easy to follow.	401	1	5	3.53	.872
DP5	The presentation of lessons (e.g., demonstrations, videos, links to relevant websites,) is designed and planned clearly carefully.	401	1	5	3.70	.849
DP6	The instructions are easy to understand.	401	1	5	3.57	.903
DP7	The assignment submission procedures are clearly stated.	401	1	5	3.77	.889
DP8	Synchronous meetings are recorded so that students who did not attend live can watch at a later time.	401	1	5	3.81	.958

The table illustrates that students highly evaluate the design and planning. In detail, a high proportion of students rate the record of synchronous meetings with the highest mean of 3.81 while “online and classroom activities work very well” only accounts for 3.43, which indicates it needs improvements if schools want to continue to integrate blended learning in the future. In general, those numbers show that since design and planning play a vital role in evaluating the effectiveness of blended learning, students do evaluate it highly and agree that blended learning is effective in their studying.

**Table 5. Descriptive statistics of contents**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
C1	The contents are easy to understand.	401	1	5	3.59	.992
C2	The theoretical contents are adequate.	401	1	5	3.78	.845
C3	The practical contents are adequate.	401	1	5	3.42	.982
C4	The contents presented are up to date.	401	1	5	3.65	.942
C5	The contents are closely related to the course objectives.	401	1	5	3.68	.910
C6	The contents presented are interesting	401	1	5	3.45	1.043

According to the table above, most students have a positive attitude toward the contents of blended learning, which is proved by the means of above 3.41. C2 receives the most positive attitude that the theoretical contents are adequate while the content presented in blended classes accounts for the lowest mean of 3.45. It is obvious that before implementing a blended learning environment in a classroom, lecturers have had months of delivering lessons remotely, both live and via pre-recorded videos – but that does not necessarily mean that all lecturers are comfortable with the change. How to present the lecture items in an interesting way seems to be challenging for some lecturers and time-consuming.

**Table 6. Descriptive statistics of technology**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
T1	I receive enough information on how to access online lessons initially	401	1	5	3.92	.885

T2	Website maintenances are carried out regularly	401	1	5	3.45	.958
T3	I can easily access the learning activities at times convenient to me	401	1	5	3.74	.914
T4	I am able to access online lessons without any problems.	401	1	5	3.67	.981
T5	I receive the technical support I need during the courses	401	1	5	3.61	.948

In general, it cannot be denied that the success of blended learning relies on students' equitable access to technology. According to the table, the highest mean of 3.92 can be understood that the information students received on how to access online courses initially is useful. In contrast, the evaluation for the website maintenance is the lowest (mean = 3.45), which indicates that it needs to improve to bring students the best using experience.

**Table 7. Descriptive statistics of assessment**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
A1	Lecturers always check students' attendance.	401	1	5	3.60	1.030
A2	Lecturers always give feedback on assignments/ tests, ...	401	1	5	3.50	.970
A3	Lecturers' feedback on other assignments/ tests... are given in a timely manner.	401	1	5	3.47	.959
A4	The lecturer's feedback helps me understand more about the lecture.	401	1	5	3.61	.926
A5	Online assessments enable me to check my progress	401	1	5	3.65	.893
A6	The quizzes and tests on online platforms are useful for assessment	401	1	5	3.65	.953

From Table 7, A5 and A6 receive the equal highest mean of 3,65. It shows the effectiveness of online assessments in students' learning processes. In contrast, A3 has the lowest mean of 3,47, which can be understood that the assessments would be not given in a timely manner. However, all the means show that nearly all the students responded positively to the "assessment" aspect. Understanding assessment and assessment strategies is critical for both lecturers and students in creating blended environments that are effective for teaching and learning. Therefore, lecturers need to identify and implement assessment strategies and methods appropriate to blended learning. This includes an understanding of the potential of a variety of technology tools for monitoring student learning and improving their teaching effectiveness.

#### **2.1.5. Evaluation of interaction**

As can be seen from the table, the majority of the students strongly agree that they are able to interact effectively with other students using online technologies while "blended learning has improved my interaction with my classmates" accounts for the lowest mean of 3.29.

**Table 8. Descriptive statistics of interaction between students and students**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
I1	Blended learning has improved my interaction with my classmates.	401	1	5	3.29	1.139
I2	I can collaborate well with other students involved in class activities.	401	1	5	3.40	.900
I3	I can collaborate well with other students in doing assignments.	401	1	5	3.35	.865
I4	I am able to interact effectively with other students using online technologies (e.g.: email, chat, discussion board.)	401	1	5	3.52	.928
I5	My fellow students are always willing to revise lessons for me through online platforms.	401	1	5	3.38	1.013
I6	I often discuss assignments with others through online platforms.	401	1	5	3.49	.980

It may have been due to the interaction through the Internet, which only consists of text messages and meetings, is much different to face-to-face interaction the students are used to. In conclusion, the effect of integrating blended learning into students' learning is overall positive. It does not only help students interact effectively with each other using online technology but also encourages students to discuss assignments with others through a variety of learning platforms.

**Table 9. Descriptive Statistics of interaction between students and lecturers**

	Statements	N	Minimum	Maximum	Mean	Std. Deviation
V1	Blended learning improves the interaction between students and lecturers.	401	1	5	3.25	1.139
V2	I can easily communicate with my lecturers during the lesson when I am online.	401	1	5	3.48	.959
V3	I always maintain interaction with my lecturers during the online class.	401	1	5	3.29	.978
V4	My lecturers always help me with my work through online forum discussion	401	1	5	3.57	.962
V5	Lecturers often raise questions to involve all the students in the lectures.	401	1	5	3.54	.969

Although blended learning in Vietnam has been developing in current years, online interactions between teachers and learners have encountered barriers due to deep influences of the traditional teaching method known as the teacher-centered approach. Vietnamese students are



generally used to receiving content from their teachers rather than discussing or developing ideas themselves.

As can be seen clearly from the table, economics students mostly agree that their lecturers are always willing to help them with their work through online forum discussion (mean = 3.57). “Blended learning improves interaction between students and lecturers” takes the lowest mean (mean = 3.25). Students have no idea about the statement “I always maintain interaction with my lecturers during the online class”. In general, interaction between students and lecturers is quite effective but it still needs some improvements in some aspects. It is critical that lecturers develop relationships with students. Providing help and support for any problems the student may have can help remove roadblocks to academic success.

## **2.1.6. Evaluation of individual perspectives**

***Table 10. Descriptive statistics of students’ perception***

	<b>Statements</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
SP1	I have a positive attitude toward the blended learning approach.	401	1	5	3.61	.964
SP2	Blended learning motivates me in learning.	401	1	5	3.32	.988
SP3	Using blended learning makes learning interesting.	401	1	5	3.38	.983
SP4	I enjoy using blended learning for my studying.	401	1	5	3.42	1.026
SP5	I would learn more through online learning materials than through paper lectures.	401	1	5	3.43	1.017
SP6	Blended learning would make me more autonomous.	401	1	5	3.64	.950

The collected data from the questionnaires reveal that students have a good experience after blended learning is integrated into their studying. Among the six statements, both SP6 and SP1 have the highest means of more than 3.6, which means the participants agree with these statements: “Blended learning would make me more autonomous” and “I have a positive attitude towards the blended learning approach”. While SP3, SP4, and SP5 are at approximately 3.4, and SP2 is about 3.3, which means the participants are neutral to them. Besides, most of the respondents’ answers are similar in rating, except for SP4, SP5 (St Deviation >1).

***Table 11. Descriptive statistics of opinions about lecturers***

	<b>Statements</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
L1	Lecturers use blended learning technology appropriately.	401	1	5	3.62	.998
L2	Lecturers use a great variety of teaching resources (e.g. web, print, video, audio...).	401	1	5	3.68	.968
L3	Lecturers use a great variety of teaching strategies (e.g. group work, discussion, projects, testing...).	401	1	5	3.66	.968

L4	Lecturers provide enough support and encouragement when needed.	401	1	5	3.63	.956
L5	Lectures adjust to fit individual abilities and interests.	401	1	5	3.64	.861

Overall, all the five statements are evaluated at more than 3.6, which means all the participants agree with these statements. Lecturers also use blended learning technology appropriately, which means they are fully prepared for a practical way of using technology in teaching. Furthermore, lecturers provide students enough support and encouragement when needed and adjust to fit individual abilities and interests. Students' perception towards lecturers are very similar (St Deviation <1), which means students highly evaluate the teaching of lecturers in blended learning approach.

### 2.1.7. Evaluation of four aspects

*Table 12. Descriptive statistics of four aspects in blended learning*

Aspects	N	Minimum	Maximum	Mean	Std. Deviation
Course outcomes	401	1	5	3.47	.666
Course	401	1	5	3.62	.685
Individual perspectives	401	1	5	3.55	.724
Interaction	401	1	5	3.42	.735

Overall, the application of blended learning to studying is quite effective. It would be indicated through the scale of all aspects, scale 4-effective, especially course aspects (mean = 3.62), which is followed by individual aspects (mean = 3.55). Outcomes and interactions in blended learning are also indicated to be effective but the figures are lower compared with others (mean = 3.47 and 3.42 respectively), nearly reaching scale 3-neutral. It means that the integration of blended learning into studying is quite successful and economics students are open to new methods of learning. However, it is of great importance to improve some aspects to make it reach scale 5, especially the interaction and course outcomes aspects.

## 3. Conclusion

To summarize, after analyzing data collected from Google Forms by using SPSS, the research discovered that the incorporation of blended learning into studying is very promising and yields positive outcomes. However, two aspects including course outcomes and interaction which are less effective than the others (course & individual perspectives) need to be improved. On the basis of the findings, the research proposes a number of solutions to improve the effectiveness of blended learning integration into teaching and learning at economics universities.

Regarding students, students' learning maturity and readiness for blending learning with its demands for independent learning must be considered. Moreover, the need to develop more responsibility for their learning and time management skills must be taken into account. Consistent and transparent communication around the new expectations is needed in order to help students understand the blended learning process.

In regards to lecturers whose roles are changed online, they need to be clearer, provide greater structure for their students, and find new ways to express emotion and otherwise provide frequent opportunities for both public and private interactions with students. In particular, lecturers need to develop new ways to project teaching presence in asynchronous online learning environments. Additionally, it is of great importance to use other course activities to support such

as written assignments, one-on-one tutorials, small group collaboration & self-testing. Lecturers should provide timely & supportive feedback, develop grading rubrics for discussion participation that reward desired cognitive behaviors

For universities, the importance of, and need for, continuing professional development for lecturers with sufficient time for development should be acknowledged. Ongoing pedagogical and technical support through membership in a blended community of practice is a proven model that sustains such lecturer innovation. Also, since it is more time-consuming in preparing the lessons, the impact on teachers' workloads must be taken into account. Due to the costliness in terms of both institutional and lecturers' investment, it is of great importance to suggest the creation of shareable and reusable digital resources in an effort to ensure that blended learning is sustainable. It is a good idea that there is room for staff to develop their own meanings for blended learning, currently poorly defined to include face-to-face classes and active learning and build commitment to the concept in addition, there should be the institutional practice of carrying out regular evaluations and publicizing the results. It is necessary to conduct surveys on students' satisfaction with the blended learning approach on a termly basis, thereby university managers can understand more about students' problems and shortcomings.

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