Blackboard Adoption in EFL Teaching: Instructors' Acceptance and Use

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اعتماد البلاك بورد في تدريس اللغة الإنجليزية كلغة أجنبية: قبول أعضاء هيئة التدريس واستخدامهم

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Abstract

This study aims to investigate the link between the unified theory of acceptance and use of technology model (UTAUT) and the acceptance and use of Blackboard (BB) among English as a foreign language (EFL) instructors. The UTAUT model was employed to determine the strength of predictors for EFL instructors' willingness to use BB for educational purposes. A questionnaire was administered to 80 EFL instructors at Taibah University. The results indicated that performance expectancy (PE), effort expectancy (EE), and facilitating conditions (FC) positively and directly correlated with behavioral intention (BI) to adopt and use BB in language classes. However, this study did not find a significant association between social influence (SI) and BI.

Keywords: Blackboard, EFL classes, Unified Theory of Acceptance and Use of Technology, online language learning

اعتماد البلاك بورد في تدريس اللغة الإنجليزية كلغة أجنبية: قبول أعضاء هيئة التدريس واستخدامهم

مستخلص البحث

تهدف هذه الدراسة الى التحقق من مدى التوافق بين عوامل نموذج النظرية الموحدة لقبول واستخدام التكنولوجيا وبين قبول واستخدام نظام البلاك بورد من قبل مدرسي اللغة الإنجليزية كلغة أجنبية. ولقد استخدم في هذه الدراسة نموذج النظرية الموحدة لقبول واستخدام التكنولوجيا بغرض تحديد مؤشرات القوة لاستعداد مدرسي اللغة الإنجليزية كلغة أجنبية لاستخدام نظام البلاك بورد للأغراض التعليمية. ولقد تم تطبيق استبانة الدراسة على 80 مدرسًا في اللغة الانجليزية من جامعة طيبة واستخدم برنامج SPSS Statistics لتحليل البيانات. وأشارت نتائج الدراسة إلى أن الأداء المتوقع والجهد المتوقع والتأثير الاجتماعي مرتبط بشكل إيجابي ومباشر بالنية السلوكية لاعتماد واستخدام البلاك بورد في فصول تعلم اللغة الانجليزية. ومع ذلك، لم تجد هذه الدراسة ارتباطًا كبيرًا بين التأثير الاجتماعي والنية السلوكية.

الكلمات المفتاحية: البلاك بورد؛ تدريس اللغة الإنجليزية كلغة أجنبية؛ النظرية الموحدة لقبول واستخدام التكنولوجيا؛ التعلم الإلكتروني

Introduction

Blackboard Learn is an example of a virtual learning environment (VLE), a means to host teaching and learning materials online and present them to learners in an accessible, meaningful manner (Blackboard, 2019). VLEs are designed to facilitate engagement with the taught subject in order to support online participation and allow for an active curation of relevant materials over time (Weller, 2007). Other VLE systems include the open-source and free-to-use Moodle, as well as paid alternatives, such as Canvas and Schoology. Like other VLE systems, Blackboard is intended to provide tutors and students on-demand digital access to learning materials that support both formative and summative assessment. Blackboard also offers the benefit of reducing printing costs (Rennie & Morrison, 2013; Nash & Rice, 2018).

In a study comparing ten rival VLE systems, the then-current version of Blackboard was found to rank among the top five platforms assessed (Al-Ajlan, 2012). Table 1 provides a summary of the number of features tested for and found in each of these VLEs.

Table 1
*Summarized comparison of 10 VLE systems ***

No	1	2	3	4	5	6	7	8	9	10
Product Name / Tools	LON-CAPA	Desire2Learn 8.1	ANGEL Learning Management Suite (7.1)	TeleTOP Virtual Learning Environment	The Blackboard Learning System (V7)	Sakai 2.3	dotLRN/OpenACS	Scholar360	ATutor 1.5.4	Moodle 1.8
Total Features	40	40	40	40	40	40	40	40	40	40
Total Available Features	30	37	37	33	36	37	31	34	35	38
Total Missing Features	10	3	3	7	4	3	9	6	5	2

*Source: Al-Ajlan (2012, p. 196).

Moodle is a leader in the VLE market—in part because it includes open courses and is free to use. However, Blackboard's subscription offer includes a helpline and a level of online support unmatched by the free-to-

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use alternatives. This advantage may be invaluable for users when troubleshooting issues or fine-tuning the desktop or mobile user interfaces to enhance students' experience. Due to high learner expectations and a conception of students as customers, there is a need for VLE software that is not only responsive to emerging issues but also proactive in addressing them. Blackboard Learn excels in this area (Blackboard, 2019).

The Use of Blackboard in Learning Environments

Blackboard supports the organization of learning materials online so that they may be accessed, added to, linked appropriately to learning outcomes, and shared with teaching colleagues and learners alike. Additionally, it allows for the collection of data that indicate students' use levels of the system. This data provides teachers an ability to monitor who is engaging with the hosted materials and who is not. Available add-ons include the ability to submit and grade assessments within the Blackboard Learn system's architecture and to assess submissions for their originality and freedom from plagiarism (Blackboard, 2019).

Blackboard Learn supports a diverse range of content formats, including video, audio, and static images. The content hosted online on the VLE may be access-controlled, which means it can only be unlocked after the completion of previous relevant work or after a designated date and time. Collaborative exercises, group discussion forums, and formative assessments—such as quizzes, multiple-choice tests, and reflective writing submissions—may be included to support active learning and students' self-assessment of progress (Blackboard, 2019). Email and live chat capabilities are integrated into Blackboard Learn, and they can be customized by the tutor controlling the course.

An effective Blackboard application depends on instructors' competence. They must be proficient users themselves in order for the system to facilitate learning; otherwise, their attempt to use the platform

will be "one step ahead for the technology, two steps back for the pedagogy" (Mioduser et al., 1999, p. 239). Carvendale (2003) claimed, "Professors at many universities say that course-management software helps them organize their courses better and brings new levels of interaction both among students and between students and professors" (p. 26).

Larsen (2012) claimed that blended learning helped EFL students on a writing course "to be more responsible for their own learning, and to take ownership of learning material" (p. viii). Yang et al. (2018) conducted research on whether online collaboration in a large university class supported quality teaching. They found that integrating computer-supported learning with traditional lecturing resulted in higher quality teaching. Soliman (2014) conducted a study entitled "Using E-Learning to Develop EFL Students' Language Skills and Activate their Independent Learning." Her findings suggested that e-learning was an essential tool that instructors should employ to enhance face-to-face EFL classes. Research by Olson et al. (2011) indicated that e-learning improves the quality of education and promotes skills that are necessary in the 21st century. In addition, Hamad (2017) found that delivering lectures through Blackboard allowed students to obtain and download lecture materials whenever they wanted, which helped them learn at their own pace.

Research Model and Hypotheses

The UTAUT model was developed by Venkatesh et al. (2003). This theory evolves four key constructs that were, in turn, developed through the incorporation of eight models: Diffusion of Innovation Theory, Social Cognitive Theory, Theory of Reasoned Action, Theory of Planned Behavior (TPB), Decomposed TPB, the Motivation Model, the Technology Acceptance Model (TAM), and a combined TAM and TPB.

Previous studies have judged UTAUT theory to be a rigorous model that can determine a technology's exact use. Venkatesh et al. (2003) defined *UTAUT* as the "user acceptance of information technology … toward a

unified view" (p. 425). This perspective suggests that the UTAUT's core aim is to explain a technology user's intentions when they are interacting with information systems. These intentions have a subsequent impact upon usage behavior (Venkatesh et al., 2003). Expanding upon this perspective, Venkatesh et al. (2003) argued that four core constructs could be identified as a result of UTAUT application: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). The first three constructs determine, shape, and direct the use of technology, and applying these constructs enables the identification or exposure of a user's behavior and intentions (Venkatesh et al., 2003). The fourth construct can be considered to directly determine technology users' behavior.

Significantly, Venkatesh et al. (2003) suggested that several social influences—such as gender, age, and a user's voluntary capabilities—could moderate the relationship between these four constructs when applied to the behavior and intention of a user interacting with a technology (Fig. 1). As previously stated, the current study's purpose is to determine these predictors' strength in relation to EFL instructors' willingness to accept and use Blackboard for educational purposes.

Figure 1

The original Unified Theory of the Acceptance and Use of Technology
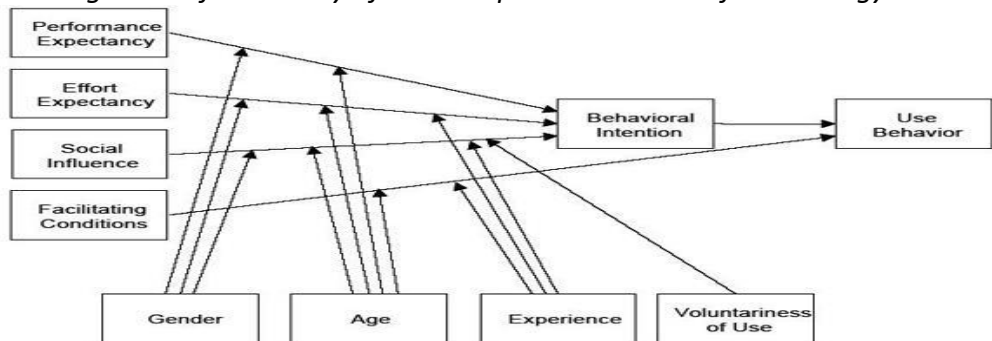
Source: Venkatesh et al. (2003, p. 447)

Performance Expectancy

Venkatesh et al. (2003) stated that PE is "the degree to which an individual believes that using the system will help him or her to attain gains

in job performance" (p. 447). Several studies have revealed that, when PE is validated (expectations are met), it is a major determinant of behavioral intention (BI). For example, Gümüşoğlu and Akay (2017) measured instructors' technology acceptance levels using UTAUT. They found that PE had a major positive effect on BI. In this study, PE related to instructors' perceptions about the potential benefits of using Blackboard for EFL teaching. The study postulates that, if instructors perceive Blackboard as useful and able to add value to their teaching experience, then they will be more likely to use it. In contrast, if they are skeptical toward Blackboard's teaching value, then they will be more resistant to adopting the platform.

Effort Expectancy

Venkatesh et al. (2003) defined *EE* as "the degree of ease associated with the use of the system" (p. 450). Several studies have revealed that, as with PE, validated EE is a major determinant of BI. For instance, Gümüşoğlu and Akay (2017) investigated lecturers' willingness to use ICT and found that most lecturers felt comfortable with its use. Bardakcı (2019) examined high school students' acceptance of using YouTube and found that EE is a "significant predictor of students' behavioral intention to use YouTube for educational purposes" (p. 263). In the current study, *EE* is the degree of ease associated with the use of Blackboard to teach EFL. This study proposes that, if instructors believe Blackboard is easy to use for teaching purposes, then they will be more likely to adopt it.

Social Influence

Venkatesh et al. (2003) described *SI* as "the degree to which an individual perceives that important others believe he or she should use the new system" (p. 451). Several studies have reported that SI is a significant predictor of BI. Blardakcı (2019) investigated the use of YouTube for educational purposes and found that "students' educational use of YouTube will more likely be influenced in case it is accepted by their peers, instructors, and family members, or within their social environment" (p. 272**)**. Eckhardt

et al. (2009) applied the UTAUT model to assess SI levels within workplace groups comprising colleagues of various seniority levels. Their study focused on Germany and found that SI has a significant impact on technology acceptance. The current study proposes that instructors will be more likely to adopt Blackboard to teach EFL if their colleagues and others value the platform.

Facilitating Conditions

FCs are defined as "the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system" (Venkatesh et al., 2003, p. 453). In their study, Gümüşoğlu and Akay (2017) found that "participants have positive attitudes towards the facilitating conditions in their institution" (p. 384). For example, in Bardakcı's (2019) examination of high school students' acceptance of YouTube, he found that the majority of students had Internet access and the necessary software to access YouTube. The current study proposes that instructors will be more likely to adopt Blackboard to teach EFL if they have the necessary support from Taibah University.

Statement of the Problem

The current pandemic (COVID- 19; coronavirus disease 2019) caused the closure of Saudi universities, which led to a strong shift in education toward online learning. Taibah University already partially used Blackboard before the pandemic.

Presently, online language learning was highly recognized by the university authority. Procedures were taken, and essential equipment was implemented. Technical support and facility access to use and adopt Blackboard as a medium of language instruction at Taibah University was highly enhanced. Moreover, speedy Internet on campus, free loaned laptops, and maintenance support were available. However, the university authority wanted to be ensured that academic instructors used and adopted

BB efficiently. Thus, technical acceptance and the current shift in education to online learning require a need to investigate university instructors' behavior intention in the acceptance of BB in language classes. Factors associated with instructors' behavior intention—such as performance expectancy, effort expectancy, facilitating conditions, and social influence, as coined in UTAUT—should be explored. Hence, this study aims to explore the relationship between the UTAUT factors and the BI predictor of acceptance behavior. To this end, the model factors performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) were explored as predictors that could influence the adoption and use of BB in language teaching.

Proposed Hypotheses

Hypothesis 1: There is a positive and significant relationship between performance expectancy (PE) and behavioral intention (BI) in the adoption and use of Blackboard (BB) for language teaching purposes.

Hypothesis 2: There is a positive and significant relationship between effort expectancy (EE) and BI in the adoption and use of BB for language teaching purposes.

Hypothesis 3: There is a positive and significant relationship between social influence (SI) and BI in the adoption and use of BB for language teaching purposes.

Hypothesis 4: There is a positive and significant relationship between facilitating conditions (FC) and BI in the adoption and use of BB for language teaching purposes.

Method

Participants

Participants in the current research consisted of 80 language instructors from Taibah University. The sample comprised 36.3% male and 63.7% female respondents. Respondents' ages were distributed as follows:

2.5% were younger than 25 years old, 33.7% were between 25 and 35 years old, 46.3% were between 35 and 45 years old, and 17.5% were over 45 years old.

The majority of respondents came from the English Language Centre (52.5%), followed by respondents in the Faculty of Arts and Humanities (21.3%), other faculties (17.5%), and the Faculty of Education (8.7%). Respondents' academic degrees consisted of 55% PhDs, 26.3% MAs, and 18.7% BAs. The overwhelming majority of participants (87%) used BB in their language classes. All participants owned laptops and were able to access the Internet on these devices as well as mobile phones. On average, they used the Internet for educational purposes for two to three hours per day.

Instrument

In an attempt to explore the research model, a survey design was devised. It consisted of a two-part questionnaire. The first part concerned demographic information, and it was designed to obtain details of participants' gender, age, faculty, and academic degrees. The second part of the questionnaire was composed of five sections based on a scale previously validated by Venkatesh et al. (2003). Each section reflected a particular factor—such as performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). Each section included four statements. These statements accompanied responses using a five-point Likert scale, ranging from *strongly disagree* to *strongly agree*. The questionnaire was used as a data-gathering instrument for this research. Of the 97 prospective respondents originally invited to participate in the current study, 80 participants returned valid questionnaires (a response rate of 82.5%). The SPSS Statistics software package was used to analyze the data.

Table 2

Instructors' Acceptance and Use of the BB in Language Teaching

Model factors	No.	Statements
Behavioral Intention	1.	I intend to be a heavy user of Blackboard for educational purposes.
	2.	I intend to devote considerable time to using Blackboard for

Model factors	No.	Statements
		educational purposes.
	3.	I plan to use Blackboard for teaching.
	4.	I plan to devote considerable effort to use Blackboard.
Performance Expectancy	1.	Using Blackboard will significantly increase the quality of my teaching.
	2.	Using Blackboard for educational purposes will increase my interaction with my students.
	3.	Using Blackboard for educational purposes will increase my academic experience.
	4.	Using Blackboard will facilitate teaching.
Effort Expectancy	1.	I expect that Blackboard is not complicated to use.
	2.	I expect Blackboard to be flexible to interact with.
	3.	Interaction with Blackboard as a learning tool is understandable.
	4.	I have found it is easy for me to become skilled in using Blackboard.
Social Influences	1.	My department head urges the use of Blackboard in teaching.
	2.	My colleagues think that using Blackboard will support my teaching.
	3.	My university administration thinks that I should use Blackboard for educational purposes.
	4.	In general, my university supports the use of Blackboard for educational purposes.
Facilitating Conditions	1.	I have the necessary knowledge to use Blackboard effectively.
	2.	I have the resources necessary to use Blackboard for educational purposes.
	3.	A specific department at my university is available for assistance with Blackboard difficulties.
	4.	The university provides students with training programs on how to use Blackboard for learning.

Validity and Reliability of the Instrument

Content and face validity was ensured by adopting the statements from an existing scale that had been previously validated. Furthermore, three language experts and four educational technology experts checked the content and face validity, suggesting some modifications and deletions.

Cronbach's alpha coefficient was used to measure the instrument's internal consistency. Reliability, as determined by the correlation coefficient alpha, was +0.87.

Results

Correlation Analysis

The data detailed in Table 3 show the relationships between the UTAUT factors (PE, EE, SI, FC) and BI (behavioral intention) and the adoption and use of BB in teaching English at Taibah University. Pearson's correlation analysis was used to test these relationships. The data indicated that all the statements were loaded significantly at $p<0.01$, except the FC factor, which was significantly loaded at $p<0.05$. These results indicated that all the factors in the model were highly reliable and valid. They also showed a highly significant relationship between PE, EE, and SI and BI at a 0.01 level of efficacy. Moreover, they showed a significant relationship between FC and BI at a 0.05 level.

Table 3

Correlations for Study Variables

Variable	BI	PE	EE	SI	FC
1. Behavioral intention	–				
2. Performance expectancy	0.481**	–			
3. Effort expectancy	0.469**	0.733**	–		
4. Social influences	0.345**	0.623**	0.462**	–	
5. Facilitating conditions	0.223*	0.669**	0.638**	0.696**	–

*$p<0.05$ **$p<0.01$.

Regression Analysis

Multivariate linear regression was used to measure the effect of the model's four factors (PE, EE, FC, SI) on participating instructors' intentions (BI) to adopt and use BB in teaching English. Using this measure, the four factors were loaded as independent variables, and BI was loaded as a dependent variable. These variables were then subjected to linear regression analysis. According to the data in the following tables, 31.7% of the variance (adjusted R-squared: 0.279) influenced instructors' intentions to adopt and use BB for English-teaching purposes.

Table 4

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	F, E, S, P[b]	.	Enter

a. Dependent variable: BI.

b. All requested variables entered.

Table 5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.563[a]	0.317	0.279	0.52902

a. Predictors: (Constant), F, E, S, P.

Confirmation of Hypotheses

To determine the standardized and non-standardized coefficient for the model factors (PE, EE, SI, FC), regression analysis was used. The results are reported in the following table.

Table 6

Regression Coefficients and Behavioral Intention[a]

Predictors	Estimate	*SE*	*t*	*p*
Intercept	0.879	0.355	2.478	0.016
Performance expectancy	0.337	0.166	2.039	0.045
Effort expectancy	0.431	0.184	2.339	0.022
Social influences	0.194	0.135	1.436	0.155
Facilitating conditions	-0.351	0.138	-2.543	0.013

a. Dependent variable: BI.

The data in Table 5 show the results of the current study's four proposed hypotheses.

H1: There is a positive and significant relationship between PE and behavioral intention to adopt and use BB for language teaching purposes.

The results indicate a positive and significant relationship between performance expectancy and behavioral intention (B=0.345, p<0.001). Therefore, H1 is supported. This finding demonstrates that language

instructors feel that using BB will greatly facilitate their English teaching and improve their teaching quality. They also consider BB a significant tool to enhance interaction with their students.

H2: There is a positive and significant relationship between EE and behavioral intention to adopt and use BB for language teaching purposes.

The results reveal a positive and significant relationship between effort expectancy and behavioral intention (B=0.360, p<0.001). Thus, H2 is supported. This finding signifies that instructors believe interacting with BB for language teaching purposes is easy and that the platform is flexible. They also think they can readily acquire the skills needed to adopt and use BB in language classes.

H3: There is a positive and significant relationship between SI and behavioral intention to adopt and use BB for language teaching purposes.

The results show no positive or significant relationship between social influences and behavioral intention (B=0.207, p<0.155). Therefore, H3 is rejected. This finding implies that language instructors believe they do not have significant encouragement from their colleagues and university administrators to adopt BB. They feel the heads of their university departments do not encourage them to integrate BB into their language classes.

H4: There is a positive and significant relationship between FC and behavioral intention to adopt and use BB for language teaching purposes.

The results indicate a positive and significant relationship between facilitating conditions and behavioral intention (B=-0.395, p<0.001). Accordingly, H4 is supported. This finding means that language instructors believe they have the requisite sources and knowledge to adopt and use BB in their teaching. They also believe the university provides assistance with BB-related difficulties.

Confirmation of Hypotheses

To test the four proposed hypotheses, standardized path coefficients and their significance were explored. The data in Table 6 demonstrate that PE, EE, and FC each had a positive and significant relationship with the behavioral intention to adopt and use BB for language teaching purposes. However, SI had no relationship with BI. Therefore, H1, H2, and H4 were supported while H3 was rejected.

Table 7

Confirmation of Hypotheses

Study Hypotheses	Coefficient	Sig.	Regression Results	Confirmation
H1: PE	0.345	$p<0.001$	Low significance	Yes
H2: EE	0.360	$p<0.001$	High significance	Yes
H3: SI	0.207	$p<0.05$	Insignificance	No
H4: FC	0.395	$p<0.001$	High significance	Yes

Conclusion and Recommendations

This study attempted to explore the relationship between the UTAUT factors and the BI predictor of acceptance behavior. To this end, the model factors performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) were explored as predictors that could influence the adoption and use of BB in language teaching. This study's results indicated that PE has a positive and direct correlation with BI. This finding implies that the participating instructors would be very likely to adopt and use BB for educational purposes. This result is consistent with the studies by Suki and Suki (2017) and by Khechine and Lakhal (2018). For instance, the results of Khechine and Lakhal's study (2018) demonstrated that "performance expectancy is the most significant predictor of actual usage" (p. 71). In their study, Suki and Suki (2017) explored students' BI to use animation and storytelling and found that, of the UTAUT factors, PE was the strongest predictor of this BI.

Furthermore, the current study found that effort expectancy (EE) and facilitating conditions (FC) also correlated positively and directly with BI to

adopt and use BB. In contrast to earlier findings, this study did not find a significant association between SI and BI. This result implies that participants would be no more likely to adopt and use BB for educational purposes if their colleagues and university administrators accepted the platform than if they did not accept the platform. The SI result in this study aligns with Pedhi's investigation (2018) of academic staff's perception of open educational recourses (OER); Pedhi found that SI had no significant impact on OER. However, the current study has not confirmed several other studies on SI's influence on BI, such as Bardakcı (2019), Isains et al. (2017), and Prasad et al. (2018).

The current study's results generate the following recommendations. University instructors should recognize the value of using BB in education, and they should positively encourage colleagues to integrate the platform into their language classes. University department heads should recommend the use of BB as an effective language teaching tool. A discussion forum should be held in the departments to encourage positive ideas about the value of using BB in education. Detailed and complete information about how to use BB effectively and successfully should also be discussed. Policymakers and university administrators should facilitate the process of using BB to improve language teaching quality.

In conclusion, this study and its results have helped identify the factors that determine EFL instructors' acceptance and use of BB in language classes. However, there is a need for future research to try to replicate the study using a different-sized sample group with different age ranges and educational qualifications. This further research is necessary to validate the proposed relationship between the examined factors and the acceptance and use of technology in language teaching. Research could also explore further factors that may influence the acceptance and use of BB, and this research could also be applied to other technologies with educational applications.

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