English as a Foreign Language Teachers' Acceptance of Using Blackboard Collaborate Ultra in Higher Education

Eman Alshehri[1]

[1] Assistant professor, English Language Institute, King Abdulaziz University, Saudi Arabia

Correspondence: Eman Alshehri, Assistant professor, English Language Institute, King Abdulaziz University, Saudi Arabia. E-mail:eaalshehri@kau.edu.sa

Abstract

Educational technologies are increasingly becoming an essential part of higher education. Teachers are using different kinds of technology to facilitate their lessons. Nevertheless, teachers' adoption of educational technology is influenced by their willingness to embrace these tools. This study examines English as a foreign language (EFL) teachers' acceptance of Blackboard Collaborate Ultra (BCU) for teaching English in Saudi Arabia. The primary aim is to investigate the factors that impact teachers' intentions to use a specific Blackboard feature for language teaching. The research adopts the technology acceptance model and external factors, such as subjective norms, facilitating conditions, and computer self-efficacy. Data was collected from 85 participants. After statistical analysis using SPSS and AMOS software, the findings indicate that all the investigated factors either directly or indirectly influence EFL instructors' intentions to employ BCU. The study also reveals that EFL teachers' attitudes towards BCU were the sole factor that directly influenced their intention to use it. The implications for teacher training are discussed below.

Keywords: EFL teachers, technology acceptance, Blackboard Collaborate Ultra, TAM model

1. Introduction

Education has benefited greatly from advancements in technology, such as computers and the Internet. Electronic learning (e-learning) has gained significant popularity in higher education institutions due to its cost-effectiveness, flexibility and accessibility, regardless of limitations imposed by time and location (Lin, Lu, & Liu, 2013). E-learning refers to "an information system that can integrate a wide variety of instructional material (via audio, video and text mediums) conveyed through e-mail, live chat sessions, online discussions, forums, quizzes and assignments" (Lee, Hsieh, & Ma, 2011, p. 355). It has been used in higher education to facilitate course delivery, design and assessment, thereby providing support for teaching and learning processes (Barnett, Keating, Harwook, & Saam, 2002; Lee, Hsieh, & Chen, 2013).

Blackboard is utilised in state universities in Saudi Arabia and was one of the main mediums of instruction in universities during the COVID-19 pandemic. On 8 March 2020, traditional classes were suspended in universities. Initially, this was to last for a few weeks but was subsequently extended several times, leading to a lengthy period of remote and online learning. Face-to-face classes resumed in September 2021 (MOE, 2021). During the pandemic, higher education institutions relied on learning management systems (LMS), including Blackboard, as their main instruction tool (Turnbull, Chugh, & Luck, 2022). Blackboard has many useful features that facilitate learning. Teachers can download soft copies of their teaching materials (PowerPoint slides, YouTube links, pictures, etc.), conduct online quizzes and exams, provide feedback, use discussion forums and use BCU to create virtual classrooms (Narwani & Arif, 2008).

The study's objective is to investigate the factors that play a part in the acceptance of BCU among EFL teachers. BCU is a virtual classroom and one of the main instructional features of Blackboard. It is a real-time video conferencing tool that enables users to incorporate files, exchange applications and utilise a virtual whiteboard for interactive purposes (Hill, 2019).

1.1 Study Purpose

After engaging with BCU for six weeks, the study was conducted to explore EFL teachers' future usage intentions. Research in the Saudi context focused on teachers' perceptions toward the use of Blackboard applications (Mohsen & Shafeeq, 2014; Tawalbeh, 2018). Some studies used the technology acceptance model (Davis, 1989) to explore EFL teachers' intention to use LMS (Alharbi & Drew, 2014; Alhojailan, 2022). However, there is a lack of research examining particular instructional features of Blackboard, such as BCU, in the Saudi higher education context. The findings of this study are anticipated to be valuable for policymakers and higher education administrators keen on promoting the adoption of technology among in-service EFL teachers.

1.2 Literature Review

Blackboard and Moodle are widely used LMSs in higher education for e-learning. These LMS platforms enable higher education institutions worldwide to utilise online instruction by delivering instructional materials and information to learners via the Internet (Browne,

Hewitt, Jenkins, & Walker, 2008; Mahdizadeh, Biemans, & Mulder, 2008; Woods, Baker, & Hopper, 2004), and LMSs are the main tool for distance learning (Almarashdeh, 2016; Lara, Lizcano, Mart ńez, Pazos, & Riera, 2014). Before the COVID-19 pandemic, LMSs were most commonly used to distribute course materials, such as lecture notes, and less commonly used for teacher–student communication, collaborative activities, online assessments and virtual classes (Blin & Munro, 2008; Browne et al., 2008). However, during the COVID-19 pandemic, it was the main channel for online teaching worldwide (Hodges & Fowler, 2020), including in Saudi Arabia (Moawad, 2020; Oraif & Elyas, 2021). In Saudi Arabia, teachers hold positive attitudes toward using LMSs (Hussein, 2011). However, they are mainly used for distance learning and posting supplementary teaching materials (Alebaikan & Troudi, 2010). The limited use of LMSs could be caused by several factors; for example, the need for technical support, systematic training in using the system for instructional tasks, such as file sharing and using forums, and self-efficacy (Alshammari, Ali, & Rosli, 2016; Hussein, 2011).

Blackboard is the most widely used LMS in Saudi higher education institutions. In fact, 89% of state universities integrate it to support instruction (Aldiab, Chowdhury, Kootsookos, Alam, & Allhibi, 2019). Studies that examined the use of Blackboard in Saudi Arabia show that, in general, faculty members believe it is easy to access and use (Alturki, Aldraiweesh, & Kinshuck, 2016; Mohsen & Shafeeq, 2014). EFL instructors have a positive attitude toward using Blackboard (Mohsen & Shafeeq, 2014; Tawalbeh, 2018). However, EFL instructors most frequently use Blackboard to insert course grades, upload course materials and send e-mails to students. They use it less frequently to participate in forums and conduct lessons in virtual classrooms (Tawalbeh, 2018).

1.3 Theoretical Framework

The main principle of technology acceptance research is that users' beliefs and attitudes can significantly influence their intentions and, subsequently, their technology usage (Venkatesh, Morris, Davis, & Davis, 2003). To describe the factors that affect the acceptance of e-learning, researchers have utilised several intention-based models. Among these models are the theory of reasoned action (Ajzen & Fishbein, 1975), the decomposed theory of planned behaviour (Taylor & Todd, 1995) and the technology acceptance model (TAM) (Davis, 1989). Of these theories, the TAM is the most prevalent and is considered "a valid and robust model" (King & He, 2006, p. 740). The TAM has been extensively empirically validated and provides a framework to explain and predict technology acceptance behaviours (e.g., Legris, Ingham, & Collerette, 2003; Scherer, Siddiq, & Tondeur, 2019).

Davis (1985) introduced the TAM, which originates from the theory of reasoned action established by Ajzen and Fishbein in 1975. Its main objective is to describe the constructs that determine the acceptance of computers. As illustrated in Figure 1, within the TAM model, the main variables include perceived ease of use (PEU), perceived usefulness (PU) and attitude towards technology adoption (ATT). Additionally, the outcome factors are behavioural intentions (BIs) to utilise technology and actual technology usage. The arrows in Figure 1 represent how one variable impacts another, with BIs predicting actual technology use. Within this set of variables, PU and PEU are considered the most significant. Users' decisions to accept or reject technologies are predominantly shaped by these constructs, as they either directly or indirectly account for the eventual outcomes (Davis, 1989; Marangunić & Granić, 2015).
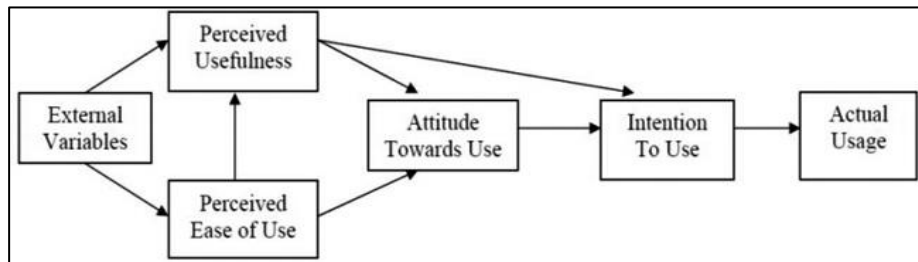

Figure 1. Original TAM model (Davis, 1989)

Over time, the TAM has been developed by incorporating additional external variables to examine variations in the PU and PEU. Notably, within the significant external factors are subjective norms (SNs), computer self-efficacy (CSE), and facilitating conditions (FCs). Such factors demonstrate varying degrees of association with the main variables of the TAM (Abdullah, Ward, & Ahmed, 2016). SNs represent social influence, while CSE reflects personal abilities and confidence in using computers. FCs encompass contextual factors that support technology acceptance. Considering the importance of these external factors, the TAM model in the current research extends to include SNs, CSE and FCs, as seen in Figure 2. For a comprehensive understanding, definitions of the different constructs are presented in Table 1.

Table 1. Definitions of main constructs

Constructs	Definition
Perceived usefulness (PU)	An individual belief about utilising a specific technology to improve productivity at work (Davis, 1989).
Perceived ease of use (PEU)	An individual perception that using a specific technology would involve minimal exertion or be effortless (Davis, 1989).
Attitude towards use (ATT)	A positive attitude towards using technology (Ajzen & Fishbein, 1975).
Computer self-efficacy (CSE)	A person is confident in their capacity to skilfully complete a particular computer-based task (Compeau & Higgins, 1995).
Subjective norms (SNs)	An individual feels that those who matter to them believe they ought to utilise a particular technology (Ajzen & Fishbein, 1975).
Facilitating conditions (FC)	An individual believes that the existence of both resources at the organisational and technical levels enhances the effectiveness of technology use (Venkatesh et al., 2003).
Behavioural intention to use technology (BI)	A person's inclination to adopt a particular technology (Ajzen & Fishbein, 1975).

These constructs have been seen to influence teachers' intention to use technology. For example, studies show that attitude significantly influences the intention to engage in a specific behaviour (Ajzen & Fishbein, 1975; Taylor & Todd, 1995; Teo & Milutinovic, 2015). This is why the construct attitude towards use is in this study and the original TAM model is used. However, there are variations in the findings of previous studies in terms of how TAM constructs and the external variables affect behavioural intention. For example, some studies have indicated that PU plays a prominent and direct role in shaping BIs (Chen & Tseng, 2012; Venkatesh et al., 2003). However, other studies found that PU has no notable impact on teachers' intention to use technology in education (Kirmizi, 2014; Teo & Milutinovic, 2015; Yuen & Ma, 2008). Variations in the significance of the different constructs in the TAM model could be due to the context, time and the type of the technology examined.

1.4 Research Hypotheses

The model used in the study (see Figure 2) incorporates the TAM model (Davis, 1985) along with external variables to clarify variations in the PEU and PU. SNs, CSE and FCs are considered among the most influential factors in determining the PEU and PU and were included in the study as external variables (Abdullah & Ward, 2016; Baydas & Goktas, 2017). The following are the 11 hypotheses that were tested:

CSE positively affects PEU

CSE positively affects PU

SNs positively affect PU

SNs positively affect PEU

FCs positively affect PU

FCs positively affect PEU

PEU positively affects PU

PEU positively affects ATT

PU positively influences ATT

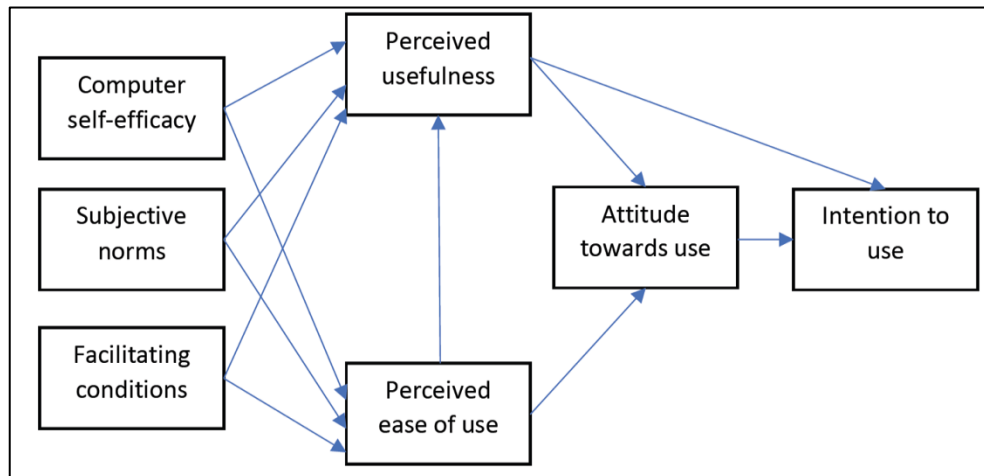PU positively influences BIs

ATT positively influences BIs

Figure 2. The adopted research model (Davis, 1989)

2. Methodology

2.1 Participants

Participants in the study comprised 85 female EFL educators teaching in a higher educational institution. Participants varied in nationality, age, qualifications and experience. Of the respondents, 64.7% were Saudi, and approximately 36% were EFL teachers from other countries, such as Tunisia, Pakistan, India or Britain. Most of the respondents were aged 35–44 (44.7%), 30.6% and 21.2% were aged 21–34 and 45–54, respectively. Only 3.5% of them were 55–64. More than 75% of the respondents had a master's degree (81.2%). Furthermore, 5.9% and 12.9% of respondents had a bachelor's degree and a PhD, respectively. An equal number of respondents had 6–10 years or more than 15 years of experience teaching English (28.2%). Additionally, 18.8% had 1–5 years of experience teaching English, and 24.7% had 11–15 years of experience. Most of the respondents had been trained on Blackboard and had used it for at least one term (41.2%). However, 32.9% of the participants had been trained but had never used Blackboard, and 25.9% had never been trained to use it. The data related to participants' demographic information is attached in Appendix 1.

2.2 Instrument

The questionnaire items used in this study were adapted from the tool designed by Venkatesh et al. (2003). They were subsequently modified to better align with the topic under investigation. The questionnaires asked participants about their views on using BCU in the future when circumstances allow it and they are free to make these decisions. The instrument consists of 24 items to measure seven constructs, which are randomised in the actual questionnaire (see Appendix 2). The instrument assesses the direct and indirect relationships among the six components (PU, PEU, ATT, SNs, FCs and CSE) and participants' future intention to use BCU. The questionnaire was assessed on a 6-point Likert scale, where a score of one signifies 'strongly disagree', and a score of six represents 'strongly agree'.

The questionnaire also collects the participants' background information, including their age, nationality, gender, last academic degree, teaching experience, experience using BCU and place of work.

2.3 Data Collection

Questionnaire responses were collected at the end of April 2020, after approximately six weeks of online teaching. When the institution granted permission to conduct the study, invitations to participate were sent via e-mail, including a link to the questionnaire. A consent form was included, which outlined the study's objectives, emphasised the voluntary nature of participation, informed participants about their right to choose not to participate and assured them of their right to withdraw from the study if they wished to do so.

2.4 Data Analysis

After examining the reliability and validity of the instrument, the expected connections between the variables in the research model were examined through multiple regressions and path analyses using SPSS and AMOS. Convergent validity was evaluated for the outlined research framework, while confirmatory factor analysis was used to assess the scale's reliability and validity. Furthermore, regression analysis was conducted using SPSS and AMOS to test the proposed research model (H1–H9, excluding hypotheses related to FCs).

3. Results

3.1 Instrument Validation

Convergent validity among scale items was assessed using the following benchmarks: Cronbach's alpha, composite reliability and average variance extracted. Initially, all scale items with standardised factor loadings above the minimum criterion of 0.60 were kept in the model (Carmines & Zeller, 1979; Hair, Black, Babin, & Anderson, 2010). Hence, six items (SN3, FC1, FC3, PEU1, CSE1 and CSE2) were

subsequently excluded from further analysis. Consequently, FCs, which included only one item (FC2), was also disregarded. Convergent validity was assessed for the remaining variables. All factors exhibited composite reliabilities above the required threshold of 0.70, and the average variance extracted for each variable surpassed the 0.50 benchmark (Hair et al., 2010). Consequently, all three requirements for convergent validity were fulfilled, as presented in Table 2.

Table 2. Convergent validity

Factors	Indicators	Standardised loadings	Cronbach's alpha	Composite reliability	Average variance extracted	Discriminant value
SNs	SN1 SN2	0.609 0.972	0.748	0.785	0.658	0.811
PU	PU1 PU2 PU3	0.666 0.646 0.741	0.729	0.726	0.469	0.686
PEU	PEU2 PEU3 PEU4	0.841 0.696 0.753	0.787	0.809	0.586	0.766
ATT	ATT1 ATT2 ATT3 ATT4	0.705 0.646 0.689 0.89	0.805	0.825	0.546	0.738
Bis	BIs1 BIs2 BIs3	0.83 0.854 0.673	0.818	0.831	0.624	0.789
CSE	CSE3 CSE4	0.639 0.778	0.657	0.671	0.507	0.712

Note: SNs = subjective norms, PU = perceived usefulness, PEU = perceived ease of use, ATT = attitude towards use, BIs = behavioural intentions and CSE = computer self-efficacy.

3.2 Regression Analysis

The proposed research model (H1–H9, with exceptions made for hypotheses related to FCs) was tested using regression analysis in SPSS and AMOS. The analysis assessed unstandardised coefficients, standardised coefficients, R-values, t-values, F-values and significance levels to confirm the direction of the statistically significant associations. Table 3 presents the results from the regression examination. The paths PU–BIs and PEU–PU dealt with the overall constructs and not latent variables. The findings indicate that the model fits the data. The results of the data analysis confirmed all hypotheses except H4 and H8.

H1 and H2 propose that CSE significantly positively influences PU and PEU. The study revealed that CSE has a significant positive association with PU ($\beta = 0.19$, p-value = 0.049 < 0.05) and PEU ($\beta = 0.328$ p-value < 0.001), strongly supporting H1 and H2. H3 and H4 suggest that SNs play a pivotal role in enhancing PU and PEU. The findings indicate that SNs have a significantly positive impact on PU ($\beta = 0.435$, p-value < 0.001) but do not affect PEU ($\beta = 0.073$, p-value = 0.324 > 0.05). H5 and H6 propose that PEU has a significantly positive influence on PU and ATT. The findings show that PU ($\beta = 0.287$, p-value = 0.023 < 0.05) and ATT ($\beta = 0.154$, p-value = 0.046 < 0.05) are significantly positively affected by PEU. H7 and H8 suggest that PU significantly contributes to fostering the intention to use BCU and ATT. The findings suggest that PU has a significant positive impact on ATT ($\beta = 0.663$, p-value < 0.001), but not on intention to use BCU ($\beta = 0.172$, p-value = 0.156 > 0.05). H9 proposes that ATT significantly contributes to the intention to use BCU, and this finding was supported ($\beta = 0.465$, p-value < 0.001).

Table 3. Regression analysis on path coefficients

	Unstandardized		Standardized	R^2	t-value	P	H.S*
	B	Std. Error	β				
PEU<-- CSE	.252	.056	.328	.524	4.462	.000	Yes
PEU<--SNs	.048	.048	.073		.987	.324	No
PU<--SNs	.390	.079	.435		4.970	.000	Yes
PU<--CSE	.199	.101	.190		1.967	.049	Yes
PU<--PEU	.392	.173	.287	.333	2.274	.023	Yes
ATT<--PEU	.219	.110	.154	.526	1.996	.046	Yes
ATT<--PU	.690	.080	.663		8.589	.000	Yes
BI<--PU	.167	.118	.172	.359	1.420	.156	No
BI<--ATT	.433	.113	.465		3.831	.000	Yes

Note: *Hypothesis Supported

4. Discussion

This research employed the TAM to investigate the elements influencing the utilisation of BCU among EFL instructors at a university in Saudi Arabia. The findings supported most of the hypotheses; only two were rejected (see Table 4). Below, the findings of the core

components of the TAM are discussed, followed by a discussion of the external constructs.

4.1 Core Components of the TAM

The findings suggest that PU does not directly influence the intention to use BCU. This finding resonates with some studies (Yuen & Ma, 2008) conducted with in-service teachers in Hong Kong (Teo & Milutinovic, 2015) and pre-service teachers in Serbia. This finding does not align with numerous prior studies that adopted the TAM to expect the intention and the usage of technology, where PU typically played an important role in driving the intention to use technology (e.g., Chen & Tseng, 2012; Venkatesh et al., 2003). This study's results suggest that PU alone is not a significant determinant of EFL instructors' intention to use BCU for English instruction, particularly within the timeframe of the study. Given the circumstances of the COVID-19 pandemic, teachers were required to swiftly adopt BCU for teaching purposes. It seems that EFL teachers in this context encountered difficulties in adapting to using BCU for English instruction, making it important to consider additional factors, such as PEU and a positive ATT, to be present to play a substantial role in shaping teachers' BIs to utilise BCU.

The results further reveal that PU directly affects teachers' attitudes towards using BCU. This connection ($\beta = 0.663$) is more robust than PEU ($\beta = 0.154$). Furthermore, PEU had a positive impact on PU. Considering the relationships outlined within the TAM, both PU and PEU indirectly predict teachers' BIs by shaping their attitudes towards using BCU. This finding confirms the initial hypotheses associated with TAM, underscoring the significance of teachers' perceptions (PU and PEU) and their attitudes in predicting BIs (Venkatesh et al., 2003). Šumak, Hericko, and Pušnik (2011) added that PEU and PU tend to influence the attitudes of diverse user categories (students, teachers, professors and employees) towards adopting various forms of e-learning technology, such as e-learning systems (e.g., WebCT) and Blackboard. Additionally, professors and teachers are inclined to consider a particular e-learning technology as valuable for teaching when it proves to be user-friendly (Šumak, Hericko, & Pušnik, 2011).

A main finding of the current study is that the attitude towards use is the only determinant with a direct positive influence on BIs towards BCU use. This aligns with previous research (Teo, 2009, 2011; Teo & Milutinovic, 2015; Yuen & Ma, 2008). This finding suggests that attitudes act as a mediator in this context (Taylor & Todd, 1995), facilitating how PU and PEU affect the intention to use technology. (Teo & Milutinovic, 2015). This implies that, in the context of this study, EFL educators would not solely embrace BCU for English instruction based on their perception of its utility and usability. It implies, rather, that teachers must also hold favourable attitudes towards this technology. Thus, professional development programs in higher education institutions should consider strengthening teachers' perceptions about technology's usefulness in education and its ease of use, in addition to promoting their positive attitudes towards technology. This is crucial, as attitude towards use appears to be related not only to BIs but also to the actual use of technology (Nistor & Heymann, 2010; Scherer, Siddiq, & Tondeur, 2019).

4.2 External Variables

The research findings reveal a direct connection between CSE and both PU and PEU, suggesting that CSE indirectly predicts the intention to adopt technology. This observation aligns with earlier investigations (Abdullah & Ward, 2016; Mei, Brown, & Teo, 2018; Scherer, Siddiq, & Tondeur, 2019). Prior experience of mastery influences competence perceptions, subsequently enhancing the readiness for future involvement or expectation of involvement in specific activities. Furthermore, these play a role in shaping individuals' perceptions of task complexity and their ability to achieve mastery (Bandura, 1977). It can be argued that self-efficacy is intricately linked to the primary variables of the TAM, potentially acting as a facilitator or obstacle to BIs and technology adoption. Consequently, higher education institutions should offer continuous training for educators to enhance their computer proficiency.

As for SNs, the findings indicate a positive impact on PU, whereas its impact on PEU is weak. The positive relationship between SNs and PU is supported by some existing research (Schepers & Wetzels, 2007; Shen, Laffey, Lin, & Huang, 2006). Previous studies have shown that SNs do not affect PEU or have a weak impact, which is consistent with the results of this study (Scherer, Siddiq, & Tondeur, 2019; Schepers & Wetzels, 2007). Scherer, Siddiq, and Tondeur (2019) explain that SNs' effects varied across studies because of specific contexts or samples. They also highlight that the connection between SNs and PEU is weak because they pertain to distinct perspectives. SNs are associated with individuals' perceptions of what others think, while PEU is linked to the attributes of the technology itself. The result of this study suggests that EFL teachers in this context do not find BCU easy to use simply because everyone wants them to use it. Other factors are needed to affect teachers' perceptions about BCU's ease of use. For example, CSE is believed to be more closely related to PEU, since it concerns how effectively a teacher can competently perform tasks using technology (Scherer & Siddiq, 2015). Overall, it can be said that CSE serves as a significant perceptual foundation for the major constituents of the TAM (PU and PEU) more than SNs.

5. Conclusion

The theoretical basis of the current research is rooted in the original TAM framework to pinpoint the main constituents influencing EFL teachers' acceptance of using BCU in teaching English. Understanding teachers' beliefs regarding incorporating such technology into instruction plays a crucial role in successfully introducing technology within educational settings. Among the examined constructs, instructors' attitudes towards using BCU are the only factor directly influencing their future intent to use it. This highlights the pivotal role of the attitude towards using such technology, as it emerges as an intervening variable that facilitates the impact of PU and PEU, along with the external constructs of CSE and SNs, on the intention to use BCU for teaching.

The data reveal that PU does not directly impact EFL teachers' intentions to use BCU. Instead, its influence is indirect and operates through teachers' attitudes towards BCU. As for external constructs, CSE seems to be more influential than SNs. CSE influences both PU

and PEU, while SNs primarily affect PU.

These results offer helpful insights into EFL teachers' acceptance of BCU, carrying implications for policymakers and teachers. Teo (2009) indicated that pre-service teachers should be provided opportunities for hands-on experience with technology in their teaching practice to foster positive attitudes towards its use. Higher education institutions should provide training programs that emphasise the practical benefits and user-friendliness of technology in teaching. They also should provide training facilities for teachers, delivering ongoing training on various educational technologies and providing technical support when needed so that instructors can gain experience with technology.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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Appendices

Appendix 1: Participants' demographic information

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Saudi	55	64.7	64.7	64.7
	Tunisian	3	3.5	3.5	68.2
	Pakistani	8	9.4	9.4	77.6
	Indian	7	8.2	8.2	85.9
	Sudanese	1	1.2	1.2	87.1
	Malaysian	2	2.4	2.4	89.4
	Bangladeshi	1	1.2	1.2	90.6
	British	3	3.5	3.5	94.1
	Jordanian	2	2.4	2.4	96.5
	Canadian	2	2.4	2.4	98.8
	South African	1	1.2	1.2	100.0
	Total	85	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21 to 34	26	30.6	30.6	30.6
	35 to 44	38	44.7	44.7	75.3
	45 to 54	18	21.2	21.2	96.5
	55 to 64	3	3.5	3.5	100.0
	Total	85	100.0	100.0	

Acadamic Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelors' Degree	5	5.9	5.9	5.9
	Masters' Degree	69	81.2	81.2	87.1
	PhD	11	12.9	12.9	100.0
	Total	85	100.0	100.0	

Teaching experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	From 1 to 5 years	16	18.8	18.8	18.8
	From 6 to 10 years	24	28.2	28.2	47.1
	From 11 to 15 years	21	24.7	24.7	71.8
	More than 15 years	24	28.2	28.2	100.0
	Total	85	100.0	100.0	

Experience with using BCU

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never trained to use it	22	25.9	25.9	25.9
	Trained, but not used before	28	32.9	32.9	58.8
	Trained, and used it before for at least one term	35	41.2	41.2	100.0
	Total	85	100.0	100.0	

Appendix 2: List of questionnaire items

Constructs	Items	Code
Perceived usefulness (PU)	I would find 'Blackboard Collaborate Ultra' useful in my teaching.	PU1
	Using 'Blackboard Collaborate Ultra' enables me to accomplish teaching tasks more quickly.	PU2
	Using 'Blackboard Collaborate Ultra' increases my productivity (i.e. accomplishes more with less effort and time).	PU3
Perceive ease of use (PEU)	My interaction with 'Blackboard Collaborate Ultra' would be clear and understandable.	PEU1
	It would be easy for me to become skilful at using 'Blackboard Collaborate Ultra'.	PEU2
	I would find 'Blackboard Collaborate Ultra' easy to use.	PEU3
	Learning to use 'Blackboard Collaborate Ultra' is easy for me.	PEU4
Attitude (ATT)	Using 'Blackboard Collaborate Ultra' is a good idea.	ATT1
	'Blackboard Collaborate Ultra' makes my work more interesting.	ATT2
	'Blackboard Collaborate Ultra' is fun.	ATT3
	I like using 'Blackboard Collaborate Ultra' in teaching.	ATT4
Subjective norm (SN)	I believe that people who influence my behaviour will think that I should use 'Blackboard Collaborate Ultra'.	SN1
	I believe that people who are important to me will think that I should use 'Blackboard Collaborate Ultra'.	SN2
	I believe that the university will support the use of 'Blackboard Collaborate Ultra'.	SN3
Facilitating conditions (FC)	I believe that I will have the resources necessary to use 'Blackboard Collaborate Ultra'.	FC1
	I have the knowledge necessary to use 'Blackboard Collaborate Ultra'.	FC2
	I believe that a specific person or group (e.g. technical support team) will be available for assistance with difficulties using 'Blackboard Collaborate Ultra'.	FC3
Computer self-efficacy (CSE)	I could complete a job or task using 'Blackboard Collaborate Ultra' even if there was no one around to tell me what to do as I go.	SE1
	I could complete a job or task using 'Blackboard Collaborate Ultra' if I could call someone for help if I got stuck.	SE2
	I could complete a job or task using 'Blackboard Collaborate Ultra' if I had enough time.	SE3
	If I had access to the instruction manuals for 'Blackboard Collaborate Ultra', I could complete a job or task using such technology.	SE4
Behavioural intention of use (BI)	I intend to use 'Blackboard Collaborate Ultra' in my future teaching.	BI1
	I predict I will use 'Blackboard Collaborate Ultra' in my future teaching.	BI2
	I have an actual plan to use 'Blackboard Collaborate Ultra' in my future teaching.	BI3