EFL students' language attitudes toward virtual learning environment: A technology acceptance model

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ABSTRACT

It is widely believed that L2 learners who have positive attitudes towards the target culture and its people are likely to learn the target language more effectively than those who do not possess such attitudes. As technology continues to be increasingly integrated into language learning, this article aims to explore EFL students' attitudes towards technology acceptance via Virtual Learning Environment (VLE), as well as the potential advantages of VLE in the EFL classroom. A quantitative approach was employed in this study, which involved 30 students from English language education departments at a private university in Indonesia. The students' computer attitudes were assessed using a Likert scale questionnaire with four factors, including affective, perceived usefulness, perceived control, and behavioural intention. The Technology Acceptance Model (TAM) developed by Davis (1989) was utilized as the framework to further examine these factors. The results indicated that the students had a positive attitude towards the Computer Attitude Scale (CAS) factors, which were categorized into affective, perceived usefulness, perceived control, and behavioural intention. The implications of each of these categories in the framework are discussed in relation to behaviourism theory.

Keywords: *EFL students; Students attitudes; Virtual learning environment (VLE); Technology acceptance*

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1. Introduction

The Covid-19 pandemic has led to a surge in popularity of virtual learning environments (VLEs) for learning a second language. VLEs have become widely implemented in higher education. The acceptance of VLEs by students is thought to play a crucial role in facilitating interaction and acquisition of a second language (L2). Interaction is widely recognized as being important in language acquisition. According to Sari (2019), both teachers and students must carefully balance expressing their thoughts and opinions while maintaining appropriate communication in language learning. Therefore, to achieve the desired learning outcomes in an L2 language course, the process of learning must include contextual verbal and nonverbal communication through VLEs. Adequate interaction and communication are necessary to achieve instructional goals.

Health issues have forced higher education to switch to online distance learning, which has disrupted learning interaction and communication. E-learning has adapted to provide various online learning approaches to ensure some measure of educational continuity, including virtual classes, video conferencing, and blended learning. Virtual learning environments (VLEs) have emerged as the most widely implemented learning environment in higher education, offering relevant messaging, repetition, engagement, and actual comments to students using online sessions. These technologies have revolutionized the study of learning effectiveness. However, it can be challenging to determine their usefulness compared to face-to-face learning. Thamarana (2016) argued that several VLE learning support instruments involve content delivery, communication and interaction, assessment, and meaningful comments, which are essential in language learning. Previous researchers, such as Al-Ruheili (2015), Bicen (2015), and Dayag (2018), have also found VLEs to be effective e-learning platforms, as they allow teachers to respond to students' questions, provide feedback, and remind them of deadlines. Nonetheless, interaction is crucial in language acquisition, and both teachers and students need to strike a balance between expressing their thoughts and maintaining appropriate communication in language learning, as emphasized by Sari (2019). Therefore, to achieve the desired learning outcomes in an L2 language course, the process of learning through VLEs must include contextual verbal and nonverbal communication to foster adequate interaction and communication to achieve instructional goals.

Due to the Covid-19 pandemic, many schools, universities, and colleges had to close to prevent the spread of the virus. On 21st April 2020, 1.723 billion learners were reported to be affected, and several studies have replicated these findings (Crawford et al., 2020; Day, 2020; Ebrahim et al., 2020; Kokutse, 2020; Quinn, 2020; UNESCO, 2020b, 2020a; UNICEF, 2020). As a result, higher education institutions have recommended the implementation of online learning platforms to ensure educational continuity and minimize the spread of Covid-19. However, recent evidence from Belawati and Nizam (2020) highlights that in Indonesia, face-to-face learning is more effective than online learning due to the challenges faced by college students, including

internet connection issues (41%), overwhelming assignments (26.8%), courses being converted to assignments (9.8%), a lack of concentration (9%), a lack of interaction with lecturers (4.3%), and unmanaged course schedules (1.6%). Therefore, there is still a need for research on the effectiveness of VLE on learners' attitudes that may be influenced by their acceptance of technology.

Many students face the significant problem of insufficient exposure to computer technologies. Despite the good intentions of educational plans and programs to improve the educational process, government e-learning policies have remained ambiguous and lacking in providing training, support services, or appropriate guidance to achieve their goals or fulfil their aims. To address this, students need to be trained, assisted, and guided in how to use technology effectively to achieve successful outcomes on their tasks and increase their awareness of the potential benefits of using technology for teaching and learning. The successful use of technology tools depends on the attitudes and willingness of students to use them, which can lead to successful implementations of those tools in the classroom. As Albirini (2006) argues, learners' attitudes and willingness to use technology are significantly influenced by the successful use of technology in education. Additionally, Gardner (1985) highlights that attitude is a factor underlying students' motivation to acquire language, and positive attitudes toward the target language are likely to result in greater language achievement. Therefore, it is essential to address students' insufficient exposure to technology and to promote positive attitudes toward technology in education to enhance language learning outcomes.

This article aims to examine students' attitudes toward VLE in EFL learning during the COVID-19 pandemic, using the Technology Acceptance Model (TAM) as the basic theory. Prior studies have utilized TAM to measure students' attitudes towards computer technologies, including the Scale of Attitude toward Computer Technologies (SACT) and Berries affecting Students' Attitudes and Use (BSAU) (Sabti and Chaichan, 2014). Mosquera (2017) also used TAM to measure students' attitudes towards technology use, finding that their perceptions and attitudes towards VLE were positive. However, it is important to investigate the students' attitudes towards VLE specifically in EFL learning in terms of affect, perceived usefulness, perceived control, and behavioural intention. Therefore, the research objective was to determine English students' attitudes towards the use of VLE in language learning and investigate whether their technology acceptance use differs based on affective factors, perceived usefulness factors, behavioural intention factors, and perceived control factors.

2. Literature review
2.1. VLE concepts

Since the emergence of web-based learning in the early 21st century, the term VLE has been widely used in education, but its precise definition is not clearly agreed upon. Several studies have highlighted the necessity of VLE for higher education during the Covid-19 pandemic era. Harmer (2007) defined VLE as course content that can be

uploaded on a website accessible only to course participants. Similarly, Rouse (2011)argued that VLE generally refers to online learning, which combines teaching and learning tools to promote students' learning abilities by utilizing computers and online materials. However, the implementation of VLE in EFL classrooms can affect students' technology acceptance attitudes, although it is not clear how technology acceptance affects students' attitudes. Recent research has defined the implementation of VLE using synchronous platforms for teaching and learning (Bozkurt and Sharma, 2020; Crawford et al., 2020). JISC (2010) found that VLE is an online program covering many tools that enhance learning and are administered to learners. Oxford (2016) asserted that VLE is a pedagogical process that involves converting resources through a network, including student assessment, tracking tools, and communication and collaboration tools.2.2 VLE in EFL learning.

In the realm of EFL, the implementation of VLE has led to an increase in the availability of native speaking teachers. Hamouda (2020) contends that virtual learning facilitates connections with native speakers beyond traditional learning methods. Additionally, VLE has played a crucial role in enhancing students' perceived usefulness of English skills, including listening, speaking, reading, and writing. Alhawiti (2017) argues that VLE enables students to practice their language skills with ease. Furthermore, Hamouda (2020) justifies the use of VLE in EFL classrooms, as it has been shown to improve students' speaking scores compared to traditional classrooms, especially with regards to grammar, vocabulary, pronunciation, comprehension, and fluency. Other collaborative studies mentioned by Al-Qahtani (2019) and Al-Rubaat, Mathew, and Sreehari (2019) have reported that EFL teachers agreed that voice and text chat tools are effective in encouraging students to improve their communication skills. Similarly, Kern et al. (2004) support the idea that video chatting enhances and fosters more sophisticated output. Therefore, Herrera (2017) claims that VLE has brought about positive learning experiences by providing access to various tools and applications.

Thamarana (2016) posits that Virtual Learning Environments (VLEs) offer various communication tools, content delivery options, and assessment instruments that enhance teaching and learning. Communication tools such as online mail, discussion boards, and virtual conversations enable effective information sharing and idea discussion between students and teachers. This interaction is critical in supporting teaching and addressing student queries, which may be missed in a traditional learning environment. Additionally, VLEs offer diverse content delivery options, including lecture notes, images, sounds, presentations, and seminars that enhance the learning experience. Furthermore, VLEs offer computer-assisted assessment tools that facilitate online evaluation of student performance. While some VLEs do not provide examination instruments, some independent examination tools may be integrated into the online platform. In conclusion, VLEs offer a collaborative platform that promotes interactive and active learning digitally.

2.2. Technology acceptance

The study of attitudes toward technology acceptance is a significant field considering the ubiquity of technology in modern society. However, despite its importance, there has been limited research conducted on attitudes toward technology acceptance in the context of Virtual Learning Environments (VLEs). Most studies on attitudes toward technology have focused on computers and Information Technology (IT), rather than the attitudes components of technology use on VLEs. In the early 1980s, a theory known as the Technology Acceptance Model (TAM) was developed by Davis (1989) to understand technology use behaviour. TAM aims to describe how individuals perceive and use technology. Davis, Morris, and Venkatesh (2003) expanded on the TAM model, which has been frequently cited and has extensive empirical support regarding the acceptance of information technology. The TAM model was derived from the Theory of Reasoned Actions (TRA) by Ajzen and Fishbein (1975), which investigates factors that influence consciously intended behaviours from the perspective of social psychology.

In the literature, there is considerable evidence that perceived usefulness (PU) and perceived ease of use (PEOU) significantly influence the acceptance of information technology. According to Davis et al. (1989), PU refers to the extent to which individuals believe that a particular system enhances their job performance. PU is based on personal perceptions of the usefulness of a system and does not require any additional effort. TAM was developed to predict individual behaviour in adopting new technology. Sheldon (2016) argues that TAM is grounded in the Theory of Reasoned Action (TRA), which suggests that behaviour is determined by the intention to perform the behaviour, attitudes towards the behaviour, and social pressure to perform the behaviour.

The Technology Acceptance Model (TAM) is composed of five variables, among which perceived usefulness and perceived ease of use are crucial factors. According to Davis (1989), perceived usefulness refers to the degree to which individuals believe that using a specific technology will enhance their job performance. Positive or negative attitudes toward computer use are shaped by how users perceive the usefulness of technology in the context of learning and teaching. Davis also defines perceived usefulness as the degree to which individuals believe that using a system will be free of effort. Additionally, perceived usefulness influences perceived ease of use, which, in turn, is also influenced by attitude. Hericko et al. (2011) further assert that perceived ease of use is a factor that affects students' attitudes. In the literature, researchers have focused on the attitude components toward technology use in information technology (IT), and there is a lack of research on attitudes toward technology acceptance in Virtual Learning Environments. Early research work in the 1980s developed a theory to understand technology-used attitudes, known as the Technology Acceptance Model (TAM), which aimed to describe technology use behaviour. TAM was derived from Ajzen and Fishbein's (1975) Theory of Reasoned Actions (TRA), which investigated factors affecting consciously intended behaviours in social psychology. Sheldon (2016) contends that TAM was grounded in TRA, which describes behaviour as stemming from the intention

of behaviour performance, attitudes toward the behaviour, and social pressure to perform the behaviour.

The Technology Acceptance Model (TAM), developed by Davis (1989), is a widely used theory for investigating users' acceptance of various technologies. TAM2, developed by Venkatesh and Davis (2000), extended the original TAM model by including the subjective norm as an additional predictor of intention in mandatory settings. The Computer Attitude Scale (CAS), developed by Selwyn (1997), is a commonly used instrument for measuring attitudes towards computer use. The CAS includes factors such as effective, perceived usefulness, behavioural intention, and perceived control factors. Affective factors refer to an individual's feelings towards computers, while perceived usefulness factors relate to their belief in the usefulness of computers for improving their job. Behavioural intention factors refer to an individual's intention to use a particular technology, while perceived control factors relate to an individual's belief that using a technology will require little effort. TAM and CAS have been applied to a variety of technologies and users, making them useful tools for investigating attitudes towards technology acceptance.

The implementation of TAM in language learning is influenced by various factors. Previous studies have shown that the acceptance of technology use can be affected by user experiences. For instance, Alfadda and Mahdi (2020) noted that positive user experiences can lead to a positive attitude towards technology. However, there is still a significant amount of uncertainty regarding students' attitudes towards technology use, specifically which attitude components might affect language learning through VLE. Most studies have focused on teachers' attitudes towards technology use and its effectiveness in achieving learning goals, rather than students' attitudes. Furthermore, research investigating the attitude components of technology use that affect language skills in EFL classrooms is still limited. To address these issues, a quantitative research method was employed, and data were collected through the Computer Attitude Scale (CAS) developed by Selwyn (1997) in the form of questionnaires to determine students' attitudes towards VLE and their capabilities in the L2 via virtual classes.

There is a growing definition in the concept of virtual learning environment and technology acceptance that leaves space for further inquiry. Virtual learning environment in the foreign language setting is also developing and it still lacks consensus on what counts as an environment and how to control it. Its impact on foreign language learning also remains unclear.

To increase our understanding in this issue, this article will examine the student attitudes toward VLE in the EFL classroom due the Covid-19 pandemic. Therefore, the following questions are proposed:

1) What is the overall profile of EFL students' attitudes toward computer use of VLE?

2) Do technology acceptances use attitudes differ by affective factors, perceived usefulness factors, behavioural intention factors, and perceived control factors?

3. Method

This study was conducted following a quantitative approach to find the trend of students' technology acceptances attitudes distinguished by affective factors, perceived usefulness factors, behavioural intention factors, and perceived control factors toward EFL classroom due Covid-19 pandemic. The setting was in a private Islamic university in Yogyakarta where its English Education Department already implements VLE in the learning process.

3.1. Study sample

The population of the study comprised the English Language Education Department (ELED) of an Islamic private university in Yogyakarta. The research involved 30 students from the 2020 batch of the ELED program at the university as respondents. The sample size was determined using a table of sample sizes for probability samples with a confidence level of 95% and a confidence interval of 5% for educational societies.

3.2. Data collecting method

The research employed questionnaires as a data collection instrument for two reasons. Firstly, questionnaires enabled the researchers to gather data from a large population in a short period of time. According to Cohen et al. (2011), questionnaires are an efficient method for collecting and analysing data from a group. Secondly, questionnaires were deemed appropriate for collecting quantitative data. As Wilson and McLean (1994) noted, questionnaires are useful for collecting information in the form of numeric data, and are able to be administered and analysed comparatively. Therefore, questionnaires were suitable for collecting data in this study. The questionnaires were distributed to respondents using online mobile surveys to save time and cost. Dillman et al (2014) asserted that online and mobile surveys are a cost-effective way of administering questionnaires as they eliminate the cost of printed questionnaires.

3.3. Instruments

The questionnaire used in this study consisted of 21 question items adapted from the Computer Attitudes Scale (CAS) developed by Selwyn (1997). The Likert scale was utilized to answer the open-ended questions and obtain systematic responses in the form of numbers. Cohen et al. (2011) claim that the Likert scale is a rating scale used to elicit respondents' answers on a statement or question. The rating scale used to determine the data on students' attitudes towards VLE in EFL classrooms consisted of four categories: 1 = very negative, 2 = negative, 3 = positive, and 4 = very positive. Additionally, the rating scale used to obtain data on technology acceptance factor attitudes consisted of four categories: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The use of the Likert scale was chosen to determine the trends in EFL students' attitudes

towards VLE in EFL classrooms. The statements in the questionnaire were categorized into four main domains, as follows:

Table 1
Questionnaire items distribution.

Part	Items	Numbers	CAS factors
1	6	1-6	Affective
2	5	7- 11	Perceived usefulness
3	6	12-17	Perceived control
4	4	18-21	Behavioural intention

Questionnaire items distribution

As seen on table 1, there are 5 parts of CAS factors questionnaire items. First, part of the questionnaire was about items number 1 to 6 which were intended to answer the students affective toward EFL classroom due Covid-19 pandemic. The second part of the questionnaire included items number 7 to 11 intended to find out the students perceived usefulness toward the EFL classroom due Covid-19 pandemic. The third part, which includes items number 12 to 17, was intended to examine students' perceived control toward EFL classrooms during the Covid-19 pandemic. The fourth, it provided the items number 18 to 21 intended to answer the students behavioural intention toward EFL classroom due Covid-19 pandemic.

3.4. Validity and reliability of the instruments

To increase the validity and reliability, the questionnaire was presented to two experts from the department faculty members at an Islamic private University in Yogyakarta to gain written responses. According to their feedback and comments, some items were changed to clarify the meaning. Some items were modified in a way that is more appropriate to the aim of the study. The reliability of the questionnaire was determined using Cronbach's Alpha, and its value showed 0.86, which indicated a high level of internal consistency for the scale. Thus, it can be concluded that the questionnaire was valid and reliable for the research.

Table 2
Result of reliability test.

No	Questionnaire	Cronbach Alpha coefficient
1	Affective	.822
2	Perceived usefulness	.817
3	Perceived control	.832
4	Behavioural intention	.821

According to Table 2, the affective dimension exhibits a high level of reliability, with an alpha coefficient of 0.822. Similarly, the perceived usefulness, perceived control, and behavioral intention dimensions show alpha coefficients of 0.871, 0.832, and 0.821, respectively, indicating high levels of reliability. Based on the minimum acceptable alpha coefficient of 0.40, all four dimensions can be deemed reliable.

3.5. Data analysis

In this study, responses were analyzed using computer variables and SPSS, with frequencies and percentages being the primary measures of interest. The resulting data are presented in Tables 1 and 2. Both descriptive statistics and inferential analyses were used, with techniques including one-way ANOVA.

3.6. Procedure

The present study employed a structured procedure that involved several preparations prior to data collection and analysis. Firstly, the researchers identified a reliable and valid questionnaire for data collection. Secondly, the questionnaire's reliability and normality were assessed to ensure data accuracy and relevance. Study participants were randomly selected from the academic year 2020/2021 student population, and self-administered questionnaires were distributed during class through a link shared with the class leader. Participants submitted their responses online. Finally, collected data were analyzed using the Statistical Package for Social Sciences (SPSS) to obtain meaningful results and conclusions.

4. Findings

This study was conducted at the ELED of an Islamic private university in southern Java, involving 30 students from the 2020 batch. The study aimed to determine the overall profile of EFL students' attitudes towards VLE computer use, specifically in terms of the CAS factors of affection, perceived usefulness, perceived control, and behavioural intention. The mean scores obtained from the questionnaire parts were used to analyse the data. Results indicate a positive attitude towards VLE in all four factors. The mean score for the affection factor was 3.58, while perceived usefulness, perceived control, and behavioural intention all received a mean score of 3.19, suggesting a positive attitude towards these factors as well.

Table 3
The students' attitudes in term of four factor of CAS.

No	CAS Factors	Mean Score	Attitudes' level
1	Affective	3.58	Positive
2	Perceived usefulness	3.19	Positive
3	Perceived control	3.19	Positive
4	Behavioural intention	3.19	Positive

Table 3 displays the descriptive statistics for the four CAS factors pertaining to VLE use in EFL classrooms. It includes mean scores and attitude levels for each factor. The results indicate that the affective factor received the highest mean score, suggesting that participants prioritize it over the other three factors. Additionally, the mean scores for perceived usefulness, perceived control, and behavioural intention were identical, indicating a positive attitude among students. Overall, the data provide insights into students' attitudes towards VLE in the four CAS areas.

Table 4

Affective factors of CAS.

Category	Frequency	Precent	Valid Precent
Neutral	5	3.3	3.3
Positive	17	58.2	58.2
Strongly Positive	8	38.5	38.5
Total	30	100.0	100.0

Table 4 reveals that 5 students (3.3%) had a neutral affective factor, while the majority (58.2% or 17 students) demonstrated a positive affective factor. Additionally, 8 students (38.5%) exhibited a strongly positive affective factor. The highest scores were for statements three and five, "I don't feel apprehensive about using a computer" and "Using a computer does not scare me at all." The CAS scale shows a clear progression from a neutral to a strongly positive affective factor among the students.

Table 5

Perceived usefulness.

Category	Frequency	Precent	Valid Precent
Neutral	3	2.3	2.3
Positive	21	76.2	76.2
Strongly Positive	6	21.5	21.5
Total	30	100.0	100.0

Table 5 shows the perceived usefulness factors and provides insight into students' perceptions. The analysis has revealed that 5 students have a neutral perception, whereas 76.2% of the students have reported a positive perceived usefulness factor. Responses to the first and second statements, specifically "Computers help me improve my work better" and "Computers make it possible to work more productively," are most strongly correlated with this factor. In addition, 21.5% of students exhibit a strongly positive

perceived usefulness factor. These results demonstrate the progression of students' perceived usefulness factor from neutral to strongly positive.

Table 6

Perceived control.

Category	Frequency	Precent	Valid Precent
Neutral	1	1.4	1.4
Positive	25	84.2	84.2
Strongly Positive	4	14.4	14.4
Total	30	100.0	100.0

Table 6 presents the findings on the behavioural intention factor of VLE use among EFL students. The results indicate that 1 student (3.3%) holds a neutral behavioural intention factor, while most students, equivalent to 60.0% or 18 individuals, have a positive behavioural intention factor. Additionally, 36.7% or 11 students exhibit a strongly positive behavioural intention factor. The highest mean scores were obtained in response to the third statement, which reads "I can make the computer do what I want it to." These quantitative results provide evidence of the progression of students' behavioural intention factor from neutral to strongly positive.

Table 7

Behavioural intention.

Category	Frequency	Precent	Valid Precent
Neutral	0	0	0
Positive	14	41.7	41.7
Strongly Positive	16	58.3	58.3
Total	30	100.0	100.0

Table 7 presents the behavioural intentions of students towards Virtual Learning Environments (VLEs), indicating that most students, comprising 46.7%, have a strongly positive or positive behavioural intention towards using VLEs. Specifically, 16 students have demonstrated a strongly positive behavioural intention, while 14 students have a positive behavioural intention. Notably, the fourth question, which pertains to using computers regularly throughout school, had the highest scores. These findings suggest that students possess a positive inclination towards utilizing VLEs and are likely to integrate them into their academic practices. Furthermore, the quantitative analysis reveals a progression in students' behavioural intentions from positive to strongly positive.

5. Discussion

The study collected the highest students' attitudes in terms of four factors of CAS, it showed from all satisfactions means score in each factor.

5.1 Students attitude toward affective factors of VLE

Our analysis showed that the highest of all satisfactions and the students had a positive attitude toward affection. The score was found in affection item number 4 "Computers make me feel uncomfortable*". It presented that the students had a positive attitude to use the computer. As supported by Albirini (2006) who pointed out that learners' attitudes and willingness to use technology have been significantly determined by the successful use of technology in educational fields. Moreover, Gardner (1985) pointed out that attitude is one of the factors underlying the student's motivation in acquiring language. For that, the language attained Language accomplishment seemed to be more highly probable if learners have such a positive attitude toward the target language. Although most of the correlated variants have shown positive attitudes towards virtual learning, student opinions on online courses appear to be quite diverse and varied. Students affirmed that the lack of interaction with their teachers had hurt their ability to assimilate and understand the subjects taught during the courses. Just a few limited numbers of teachers were fortunate enough to deliver their lectures through video conferences.

5.2. Students attitude toward perceived of usefulness factors of VLE

Our analysis found that students in the EFL classroom exhibited a positive attitude towards the perceived usefulness (PU) factors of Virtual Learning Environments (VLE), as evidenced by an overall mean score of 3.19 for all items related to perceived usefulness. Davis et al. (1989) define PU as the user's perspective on how using a particular system can enhance job performance. Additionally, JISC (2010) asserts that VLE is an online program that encompasses various instruments aimed at improving learning outcomes. Surani and Hamidah (2020) suggest that online learning facilitates easy collaboration and enables students to utilize various sources, thereby enhancing learning efficiency. The convenience factor also emerges as a crucial motivator for students to continue using online learning methods. Alhawiti (2017) emphasizes the ease of practice for language skills that VLE offers to students. In contrast, Hamouda (2020) provides evidence that the use of VLE in EFL classrooms has led to improvement in students' speaking scores as compared to traditional classrooms, particularly in grammar, vocabulary, pronunciation, comprehension, and fluency. However, Ganapathy (2019) points out that teachers face certain challenges in adopting VLE, such as a lack of awareness, time, ICT skills, training, and infrastructure. Assoodaret al. (2016) underscore the importance of learner, instructor, course, technology, design, and the environment in enhancing the perceived usefulness of VLE. Chua and Montalbo (2014) have evaluated students' perceived usefulness with the use of VLEs as a support technology in teaching, which

they found to be effective in supplementing traditional classroom instruction. The literature highlights specific VLE features that students appreciate, such as handbooks, staff contact information, access to previous modules, assessment information, and further reading. According to data from the National Student Survey, students also value lecture recordings, improved feedback, updates on planned activities, and more computers to access online resources (Reed and Watmough 2015). It has been suggested that learners are more motivated to participate in lessons if VLEs provide tools for self-assessment, contain interesting course materials, and provide faster responses to their queries.

5.3. Students attitude toward perceived control factors of VLE

In terms of the students' satisfactory level, our finding shows that they have a positive attitude toward the perceived control factor, as indicated by the mean score of 3.19. Scherer et al. (2019) argue that perceived control factors refer to an individual's belief that minimal effort will be required to use a particular technology. This suggests that the students thought they could use the technology without serious troubles. In the context of EFL learning, VLE provides several tools that support students' perceived control, including communication tools such as online mail, discussion boards, and virtual conversations, as well as content delivery tools like lecture notes, images, sounds, audiotapes, PowerPoint presentations, and evaluation tools such as exams and web-based assessments. Thamarana (2016) noted that such tools enhance communication between students and teachers, which fosters information sharing and idea exchange. However, while the present study highlights the positive attitudes of EFL students towards perceived control through VLE, further research is needed to explore other potential factors that may influence language learning through technology. Additionally, more investigations are required to assess the impact of VLE on students from diverse cultural backgrounds and educational contexts.

5.4. Students attitude toward behavioural intention factors of VLE

The study has revealed that students held a positive attitude towards the behavioural intention factor, as indicated by a satisfaction mean score in the previous section. Turner et al. (2010) emphasized that behavioural intention factors are related to an individual's intentions to use a particular technology. In the EFL classroom context, this was demonstrated by how students perceived the use of computers regularly for learning. Alfadda and Mahdi (2020) noted that users' positive experiences have a significant impact on their attitude towards technology. Despite this, there is still considerable ambiguity surrounding students' attitudes towards technology use, particularly which attitudes may influence language learning through VLE. Many studies have focused solely on teachers' attitudes towards using technology to enhance learning effectiveness, rather than exploring students' attitudes. Additionally, there is limited research investigating the components of technology use attitudes that affect language

skills in EFL classrooms. Further research is needed to address these gaps and provide a more comprehensive understanding of students' attitudes towards technology use in language learning.

6. Conclusion

The present study aimed to investigate students' attitudes towards technology acceptance through Virtual Learning Environments (VLEs), and the findings suggest that students' attitudes towards VLEs are significantly positive. Notably, the Computer Attitude Scale (CAS) factors of affection, perceived usefulness, perceived control, and behavioural intentions emerged as significant predictors of students' attitudes towards technology acceptance through VLEs. These results highlight the crucial role of EFL students' attitudes in their technology acceptance through VLEs. Furthermore, VLEs provide numerous beneficial tools to support learning, including communication tools such as content delivery, lecture notes, images, sounds, audio tapes, presentations, qualifications tools, and eclectic instruments.

However, several limitations of the study should be acknowledged. Firstly, the data were collected exclusively from the English Language Education Department enrolled in one Islamic private university in Yogyakarta. As a result, these findings may not be representative of the entire population of EFL students in Indonesia. Therefore, future research could target more diverse students in terms of department, institution, and geographic location to strengthen the current findings. Additionally, as this study only focused on EFL students, the findings may not be generalizable to other languages or wider contexts. Secondly, while this quantitative study advanced our understanding of the phenomenon under investigation, further research is also required to collect qualitative data and analysed it with greater nuance and precision.

In conclusion, the present study provides valuable insights into EFL students' attitudes towards technology acceptance through VLEs. The findings emphasize the importance of considering students' attitudes towards technology acceptance and the influential role that VLEs can play in supporting student learning. However, limitations of the study suggest the need for future research to further explore this phenomenon in diverse student populations and contexts using both quantitative and qualitative methods.

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