

Students's Attitudes Toward the Use of CANVAS in the EFL Virtual Learning Environment

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Abstract

This study examines students' attitudes toward the Learning Management System (hereafter LMS) CANVAS in the Virtual Learning Environment (henceforth VLE). This study used mixed methods in nature, which used a survey to collect data on the attitudes of 118 EFL students who enrolled in the Technology Enhanced Language Learning (hereafter TELL) course. Researchers gathered data through a questionnaire and semi-structured interviews to assess students' attitudes using the Technology Acceptance Model (TAM). The survey results were analyzed using descriptive statistics to investigate the quantitative data, while thematic analysis was used to study the qualitative data obtained from interviews. The survey results were analyzed using descriptive statistics to investigate the quantitative data, while thematic analysis was used to study the qualitative data obtained from interviews. Based on the research findings, the TAM framework identifies two main categories: Perceived Usefulness and Perceived Ease of Use. The Perceive Usefulness category comprises four categories: CANVAS Engagement Time, CANVAS Enhances Interaction, Learning Efficacy, and Effective Communication, CANVAS Enhances Language Learning, and CANVAS Boosting Students' Confidence and Motivation in a Fun Way. In addition, the Perceive Ease of Use category comprises three categories: CANVAS Usability in Mobile Learning Environments, CANVAS User-Friendly Design, and CANVAS Seamless Navigation and Accessibility.

Keywords: CANVAS; English as foreign language (EFL); students' attitudes; technology acceptance model (TAM); virtual learning environment (VLE)

Introduction

Adopting VLE in education and training has greatly increased the significance of LMS, especially during and after the COVID-19 pandemic (Zhou et al., 2022; Ataby, 2021). Although academic research on LMS has increased, especially during the pandemic, the majority of studies have concentrated on conducting systematic literature reviews or evaluating user attitudes. Due to the scarcity of quantitative studies on the use of LMS in existing literature, there are few opportunities for empirical comparison. Moreover, institutions may have challenges when it comes to choosing the LMS that is most suitable for their specific institutional requirements and objectives, given the wide array of options accessible (Apriani et al., 2022; Santiana et al., 2021; Husnia et al., 2023). Empirical comparisons of various LMSs can offer crucial data and information, serving as a point of reference for learners, instructors, and institution managers who are choosing and implementing an appropriate LMS.

LMS is widely utilised in educational institutions worldwide. Due to the evolving learning approaches and procedures in VLE, there is a significant need for LMS. Given the fact that there are many companies in the e-learning market offering LMS, the task of selecting a suitable LMS from the numerous options available is highly daunting. Conducting practical tests on various LMSs and analysing the results will assist in determining the criteria required to guide individuals in choosing an LMS. CANVAS is one of the LMS that lecturers and students might need for the TELL course. The integration of LMS has become a fundamental aspect of VLE in the quickly changing field of education. Out of all the platforms available, LMS CANVAS is particularly notable for its widespread use (Pujasari & Ruslan, 2020; Santiana et al., 2021). It provides educators and students with a flexible digital environment for online training (Basri, et al., 2020; Alenezi, 2023). Amidst the increasing number of technological advancements, it is crucial to comprehend students' perspectives on these platforms to enhance the effectiveness of virtual learning.

Given the novelty and unexpectedness of utilising CANVAS in VLE in Indonesia, conducting a quantitative and qualitative study on CANVAS in EFL VLE is essential. This study aims to assess students' attitudes and performance. The reverse class offers numerous chances and can be considered a beneficial learning model for solving the concerns mentioned earlier. Moreover, this study investigates students' attitudes toward using CANVAS in a VLE utilising the TAM framework.

Literature review

Learning management system (LMS)

Due to the current circumstances, lecturers must be conversant with and capable of doing web-based education as per the alternatives to the COVID-19 pandemic. Using an LMS is regarded as a standard method lecturers adopt in their teaching and learning process (Basal, 2016). LMS is a term often used to refer to a variety of systems that give students, lecturers, and administrators virtual services for education (Aldiab, et al., 2019), with the particular primary role of supporting, organising, arranging, and managing training courses (Khoa, et al., 2020). LMS also provide an e-learning platform for students and lecturers to strengthen knowledge acquisition. LMS supports lecturers and students in the learning experience in VLE (Bradley, 2021). Furthermore, the use of technology has caused significant structural changes in educational programs by integrating digital

learning technologies into universities, virtual learning or virtual education, open learning material, and integrated learning through the use of LMS (Gökgöz & Ergün, 2019).

Furthermore, Fathema, et al., (2015) assert that the LMS enables enhanced and quicker virtual communications between students and teachers because these capabilities need to be mentioned, along with speed and efficiency in the educational procedure. In addition, using a LMS, learning and teaching are no longer limited to asynchronous classes (face-to-face). However, it is also possible to accomplish it outside the classroom (Nguyen & Winman, 2020). Furthermore, the lecturer can use LMS for a more successful VLE by maximizing the features given by the LMS in developing and delivering education, permitting the students and lecturer to connect effectively through virtual meetings with students throughout the learning process. Moreover, it is conveniently accessible from anywhere and at any time.

CANVAS at a glance

CANVAS, a cloud-based Learning Management System (LMS), was created and launched by Instructure, an American education technology firm, in 2011. It is widely recognised for its stability, boasting a reliability rating of 99.9% (Rabah, 2017). Furthermore, it boasts a substantial acceptance rate, with over 80% of educational institutions in North America opting for it during discussions to renew their LMS contracts (Hill, 2016). CANVAS provides a range of features and functionalities that lecturers and students may utilize. These include accessing pre-recorded lectures, communicating with teachers, downloading course materials, completing online quizzes, and submitting assignments. In addition, teachers can save class content, efficiently prepare and deliver online assignments, generate course announcements, and effectively manage student grading (Endozo, et al., 2019; Pujasari & Ruslan, 2020; Santiana, et al., 2021). The introductory landing page offers learners six tabs, each leading to different regions of the LMS based on the specific information or goals they want.

With its various features, CANVAS has become one of the LMSs required by the lecturer. CANVAS is a platform for learning, a cloud-based learning system that allows lecturers and students to access knowledge and material during a course based on virtual interactive activity. CANVAS, in other terms, is an LMS that is used to organize classroom activities (Nguyen & Winman, 2020; Santiana, et al., 2021). CANVAS has various advantages that lecturers can use to advance the efficacy of teaching and learning. It provides lecturers with the ability to easily admittance the conversation, schedules of the course, videos of lecturing, grades, course work, message analytics, reports, groups, evaluation of peer review of students' tasks, and more academic tools (Pujasari, 2021; Pujasari & Ruslan, 2020; Santiana et al., 2021; Ataby, 2021). It was discovered that students had very mixed feelings about the utility of CANVAS. CANVAS was mainly used to monitor the student's academic advancement, with specific administrative chores, including gaining a comprehensive understanding of the course, managing their tasks, receiving grades, and obtaining feedback from lecturers (Dang, 2020). CANVAS is also an excellent tool for fostering interaction between lecturers and students and among their peers during online learning (Littlefield, 2019; Burrack & Thompson, 2021; Santiana, et al., 2021), it is also an excellent platform for overcoming a lack. This case ushers in a new era for most Indonesian instructors/lecturers (Pujasari, 2021).

Nevertheless, when lecturers want to use CANVAS in their instructional practices, they must be able to use it by acquiring the necessary competencies to manage it, which may encourage a more fascinating and successful education. The suitable media for learning can produce good results concerning the present situations and requirements (Jusuf, et al., 2021). Another reason is

that the system occasionally does something unexpected, leaving lecturers needing clarification about resolving the issue. Most lecturers rely on the stability of their online learning platform, and minor errors can have a significant impact. The ability to view modules on their pages and the design-your-own front page would also prove beneficial. Therefore, it would be advantageous if a lecturer had mastered CANVAS's entire system and features (Littlefield, 2019; Burrack & Thompson, 2021; Santiana, et al., 2021).

EFL virtual learning environment

A VLE is a digital platform providing educational resources and online learning tools. It encompasses online classes, reading materials, educational websites with skill assessments, and other methods of learning spoken English online. Promoting VLEs often addresses the challenges of educating individuals in remote locations and across international borders. Students can engage in diverse tasks within a computer-based learning environment. Universities have implemented digital teaching methods due to the worldwide outbreak of COVID-19, expediting the integration and utilisation of technology for methodological adaptation (Rosmaladewi & Abduh, 2019; Garcia, et al., 2021; Apriani, et al., 2022; Cardoso et al., 2023). Research has shown that the VLE is more effective, efficient, and satisfying than traditional learning settings in designing, implementing, and evaluating the VLE (Dumford & Miller, 2018; Dung, 2020; Maaliw, 2020; Martin, et al., 2021; and Caprara & Caprara, 2022). The studies referenced include Estriegana et al., 2021; Esra & Sevilen, 2021; Wijesooriya et al., 2019; Albiladi & Alshareef, 2019; Suleri, & Suleri, 2019; and Halili, et al., 2018. These studies explore traditional classroom learning and compare it to studying using a VLE.

In the context of EFL, integrating LMS CANVAS is very important for increasing student interaction and participation in virtual learning settings. EFL virtual learning settings frequently serve broad cohorts of learners from various linguistic and cultural backgrounds, bringing distinct problems and opportunities for language acquisition and communication. Recent research by Castillo et al., 2022, has demonstrated the potential of technology, especially LMS platforms, to increase communicative language education and learner interaction in virtual contexts.

Yaprak (2022), Majano et al., 2022, and Furqon et al., 2023, investigated the impact of LMS platforms on EFL education, particularly emphasising the role of CANVAS in supporting interactive language learning activities. The results showed that integrating CANVAS dramatically increased student interest and participation in EFL classes, allowing for collaborative learning and authentic communication. Similarly, Pham and Nguyen (2021) investigated the effectiveness of LMS platforms in improving language acquisition and communication skills among EFL learners. The study found that CANVAS' interactive features, such as discussion forums and multimedia materials, helped students enhance their language proficiency and cultural competence.

CANVAS's interactive features, such as discussion forums, collaborative assignments, and multimedia-rich content delivery, enable EFL instructors to build dynamic learning experiences that encourage students' active engagement and meaningful language practice. Mann's (2022) research demonstrates that collaborative activities provided by LMS platforms such as CANVAS can improve language learning outcomes by allowing learners to communicate and collaborate authentically. Furthermore, the seamless integration of multimedia resources and real-time feedback mechanisms within CANVAS enables EFL instructors to personalise training to student's particular needs and learning styles, increasing overall engagement and comprehension. EFL educators can use the interactive capabilities of LMS CANVAS to encourage authentic

language use, communication skills, and cultural competence in learners, equipping them for success in an increasingly interconnected and globalised world (McDaniel & Telep, 2021; Ene, 2023; Anggarini, 2024).

Technology acceptance model (TAM) for students' attitudes criteria

Nevertheless, in determining the achievement of teaching and learning activities, lecturers must also consider students' attitudes toward the lecturer's innovation, in this context, the use of CANVAS as LMS to enhance interactive VLE. As used in this current study, perception refers to the compelling instruction for students of cognitive engagement with their surroundings (Efron, 1969; Hamlyn, 2022). This study employed Davis' TAM framework, as seen in Figure 1, to uncover students' attitudes toward CANVAS and provide an interactive VLE (1989).

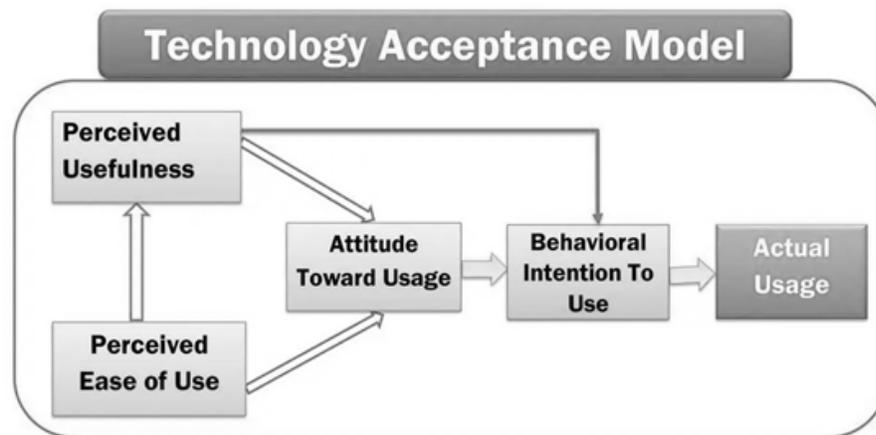


Figure 1. Technology Acceptance Model (TAM) by Davis 1989

As demonstrated by Davis' idea, whenever someone encounters a new technology, his or her choice to provide it is influenced by several criteria, such as Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) (Binyamin, et al., 2019). PEOU refers to a person's opinion that using a particular technology will be simple, whereas Perceived Usefulness refers to a person's belief that using a specific system will advance his or her performance (Binyamin, et al., 2019; Davis et al., 1989). Indeed, many researchers have developed perceptions in academic research. For example, Carbonilla & Bhati (2016) attempted to study students' perceptions of using technology in teaching and learning, particularly in the Philippines' higher education institutes. After offering the students a treatment to use educational technology, they observed overall perceptions. The findings indicated that most students had unfavourable repercussions when utilizing mobile internet. Ekinci and Ekinci (2017) conducted another study to assess students' perceptions of mobile learning tools for learning the English language. The findings indicated that mobile tools could benefit EFL learners by outlining their benefits and drawbacks. Moreover, Fatimah & Santiana (2017) investigated the Perceptions of students and teachers of instructional technologies concerning 21st-century teaching. In addition, Santiana et al. (2021), Richards & Jones (2021), and Fatimah & Nurfitriani (2022) also conducted research related to students' perception of CANVAS LMS for interactive online learning. They discovered that employing technology as a teaching medium can improve students' learning experiences.

The integration of LMS has become a crucial element of VLE in the ever-evolving educational field. Out of all these platforms, LMS CANVAS is particularly notable for being a

widely used tool that offers educators and students a versatile digital environment for participating in online training. Nevertheless, as technology continues to improve, it is crucial to comprehend students' perspectives on these platforms to optimise the effectiveness of virtual learning. However, a limited number of studies have been undertaken to examine students' perspectives regarding the usage of CANVAS to facilitate an improved VLE. In this study, the researcher aims to assess students' attitudes towards using CANVAS in the EFL VLE. The goal is to enhance the interactive VLE by applying the TAM as a guiding framework. The study seeks valuable insights into the factors influencing students' engagement with the platform.

The TAM framework posits those two primary elements influence technology acceptance: perceived usefulness and perceived ease of use. Within the framework of LMS CANVAS, perceived utility pertains to the extent to which students perceive the platform's effectiveness in facilitating their learning goals, while perceived ease of use refers to the comfort level in navigating CANVAS for educational purposes. The study's findings have significant implications for enhancing the design and implementation of VLE as educators and institutions navigate the difficulties of online instruction. By gaining a more comprehensive understanding of students' perspectives on the LMS CANVAS using the TAM, educators may adapt their teaching methods and technological interventions to effectively address the diverse needs of students in the digital era.

Research method

Research design

The study uses a mixed-method embedded design that explains natural events in undisturbed contexts. This design combines qualitative and quantitative methodologies into a single study. In this scenario, the study uses both qualitative and quantitative methods to explore students' impressions of the use of the LMS CANVAS to boost interactive virtual learning experiences. The research takes a positivist perspective, emphasising objective, empirical observation and the scientific method in analysing social processes. This technique is consistent with survey research to collect data on students' attitudes, opinions, characteristics, and behaviours when using LMS CANVAS. Surveys are used as the primary data collection strategy. Surveys entail querying many people to learn about their attitudes, behaviours, or traits. Survey data is often quantitative, providing statistical insights into the studied phenomenon. Survey data are statistical and numerical. The data shows that the study's goal is to quantify students' impressions and experiences using the LMS CANVAS. The primary goal of the research is to determine students' perceptions of the implementation of LMS CANVAS as an improvement to interactive VLE. This data includes investigating students' attitudes, beliefs, and experiences with the platform. The project intends to conduct an in-depth analysis of survey data using a specified framework. The researchers use various analytical tools to assess the survey responses and reach significant conclusions regarding the usefulness of LMS CANVAS in improving virtual learning experiences. Overall, the study aims to provide insights into the efficiency of LMS CANVAS in creating interactive VLE from students' perspectives, using both qualitative and quantitative approaches within a positivist framework by using the TAM framework.

Participants' profile

This study was conducted at one of the universities in Tasikmalaya, West Java. The focus of the study was on the English Education Department. The choice of this university allows for a detailed analysis of students' perspectives on LMS CANVAS in a specific academic environment,

which is part of the larger context of EFL instruction in Indonesia. Of the 148 students enrolled in the TELL Course, 118 respondents participated in the survey (See Table 1). This group is comprised of 38 male students and 80 female students. By including a significant proportion of the student population, the study's findings are made more reliable and valid due to the representative nature of the sample. This study utilised the non-probability sampling technique known as voluntary sampling. This sampling methodology enables the selection of participants who willingly and voluntarily participate in the study, thereby offering valuable insights into the attitudes and perspectives of students who actively and enthusiastically interact with the subject matter. Although voluntary sampling may result in certain biases, such as self-selection bias, it provides practical benefits in terms of accessibility and feasibility within the limitations of the research environment.

The Participants of this research are in the sixth semester of the ongoing academic year; the students who enrolled in the TELL course and their ages ranged from 19 to 20 years old. Selecting participants from a particular academic year and age range ensures a homogeneous sample, reducing the likelihood of potentially confounding variables resulting from differences in academic experience or age-related characteristics. Moreover, explicitly targeting students in their sixth semester may investigate their attitude towards the LMS CANVAS among persons who have been extensively exposed to both conventional and online teaching methods in the English as a Foreign Language (EFL) curriculum.

This research seeks to improve the transparency and trustworthiness of its findings by offering comprehensive details on the study's methodology and participant characteristics. This project aims to provide valuable insights into integrating technology in EFL teaching by using a systematic and rigorous data collection and analysis approach. The insights produced are relevant to the specific context and based on reliable methodologies, contributing to the broader discussion on this topic. It also utilised the non-probability sampling technique known as voluntary sampling. This sampling methodology enables the selection of participants who willingly and voluntarily participate in the study, thereby offering valuable insights into the attitudes and perspectives of students who actively and enthusiastically interact with the subject matter. Although voluntary sampling may result in certain biases, such as self-selection bias, it provides practical benefits in terms of accessibility and feasibility within the limitations of the research environment.

Table 1. Participants profile

	Amount	Percentage (N=118)
Sex		
Male	38	32.2%
Female	80	67.8%
Age		
19-20	118	100%

Instrument: Procedure of data collection and validation

To gather information and inquire about students' attitudes on using LMS CANVAS to enhance interactive VLE, the researcher employed a close-ended questionnaire and semi-structured interviews (SSIs) with the respondents to give reliable information about how participants perceive things. The data was analysed to determine how to use the LMS CANVAS to improve collaborative virtual learning among students in the TELL Course. Moreover, survey data were evaluated and statistically calculated using a Likert scale. The questionnaire contained

15 statements with four Likert scale alternative answers using a 1-4 Likert Scale (4=Strongly Agree, 3=Agree, 2=Disagree, 1=Strongly Disagree) to explore their perceptions of the use of CANVAS in the EFL Virtual Learning Environment.

The researchers employed a semi-structured interview method to allow for the expansion of questions based on the respondents' answers. The purpose of its design was to obtain accurate and specific information from students about their experiences with LMS CANVAS, intending to enhance interactive VLE. The supplementary inquiries in this interview were constructed using questionnaire analysis to comprehend the student's perspectives comprehensively.

Data analysis

The data was analysed using descriptive quantitative and qualitative approaches. The questionnaire data had 15 items with four Likert scales, as mentioned in the instrument section. The data was quantitatively analysed in the form of a percentage. Meanwhile, the interview data were analysed using descriptive and qualitative methods, employing Braun and Clarke's (2006) thematic analysis, which consists of the following steps. After completing data collection by conducting interviews with respondents, the researcher began the meticulous process of transcribing the collected data. The researcher conducted a thorough analysis, repeatedly reviewing the transcribed material to obtain a thorough knowledge of its contents.

The goal of this iterative method was to improve comprehension of the fundamental issues and relevant information based on the data. After becoming acquainted with the data, the researcher continued categorising it systematically into multiple codes, each representing a distinct feature or concept identified in the dataset. Every single data point was painstakingly encoded, ensuring perfect classification and placement for later analysis. The next steps after completing the first coding were for the researchers to uncover overarching patterns that emerged from the data. Using a methodical review and analysis technique, the data codes were categorised into thematic clusters based on their shared qualities or underlying themes.

The thematic groupings were utilised to summarise the bigger patterns and trends discovered in the dataset. The researchers closely examined the chosen themes during a critical analysis stage to ensure their validity and dependability. This stage involved carefully examining each topic's logical link and consistency and any potential duplications or repeats. Modifications were made as appropriate, with some themes potentially requiring further improvement or division, while others may be amalgamated to streamline the study. The researchers then expanded on the confirmed patterns, precisely identifying and assigning unique names to each.

This procedure entailed thoroughly examining the fundamental ideas within each thematic area, ensuring that the titles accurately conveyed their content and importance. Themes may also be combined or polished to improve clarity and cohesion. The final steps of the analysis entailed interpreting and reporting the results. The researchers selected relevant remarks or data snippets to demonstrate each theme's core. These interpretations were then placed in the context of the larger study issue and current body of literature, allowing for a more in-depth understanding of the implications and significance of the findings. Finally, a scientific report was created, which consolidated the key findings obtained during the data analysis process.

Results

The results of the research revealed two main components of attitudes using the Technology Acceptance Model (TAM) framework: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU refers to the degree to which individuals believe that using a particular technology

would enhance their performance or productivity in accomplishing tasks. PEOU, on the other hand, relates to how individuals perceive technology as easy to use and user-friendly. These components serve as fundamental determinants of individuals' acceptance and adoption of technology, offering valuable insights into the factors influencing students' attitudes towards LMS CANVAS in the context of VLE.

Perceived usefulness (PU)

Perceived Usefulness is a fundamental element in the Technology Acceptance Model (TAM) framework, which aims to comprehend students' attitudes and actions around adopting technology. Within the framework of CANVAS, Perceived Usefulness encompasses four distinct categories that encapsulate students' attitudes towards the platform's utility and effectiveness in facilitating their learning experiences. These categories include CANVAS Engagement Time; CANVAS Enhances Interaction, Learning Efficacy, and Effective Communication; CANVAS Improve Learning Efficacy and Effective Communication; CANVAS Enhances Language Learning; and CANVAS Boosting Students' Confidence in Fun Way.

CANVAS engagement time

On average, the total number of hours students spent exploring CANVAS ranged from ten minutes to three hours (See Table 2). The data in Table 2 show that students' involvement with CANVAS differed in time spent on the site. The table shows a breakdown of time spent using CANVAS, organised by time interval and the relevant frequencies and percentages. The table presents data that offers insights into how students allocate their time using CANVAS, categorised into several time intervals. Most students allocate their time on CANVAS within 91 to 120 minutes (46.61%) and 61 to 90 minutes (29.67%). It is indicated that many students actively participate on the platform for around one and a half to two hours. The data indicates significant engagement with course materials, assignments, and other learning activities offered on CANVAS over the specified periods.

Table 2. The students' time spent of using CANVAS

No	Time Spent	Average (minutes)	Frequency	Percentage (N=118)
1		1 – 30	5	4.24%
2		31 – 60	5	4.24%
3		61 – 90	35	29.67%
4		91 – 120	55	46.61%
5		121 – 150	15	12.71%
6		151 – 180	3	2.53%

Moreover, 12.71% of students allocated 121 to 150 minutes on CANVAS, indicating a modest but significant proportion of students devoting more than two hours to their interaction with the platform. This group is likely composed of students who actively participate in various activities, such as completing assignments, engaging in conversations, and utilising additional resources. These behaviours indicate a higher level of dedication to their studies. Moreover, fewer students were allocated shorter or longer periods on CANVAS. Merely 4.24% of students allocated their time on the platform within 1 to 30 minutes and 31 to 60 minutes, signifying limited involvement during these specific periods. In a similar vein, a mere 2.53% of students dedicated a time of 151 to 180 minutes on CANVAS, indicating a lack of substantial involvement at these extended time intervals.

Furthermore, students' time spent on CANVAS shows different levels of involvement, with a notable part committing approximately one and a half to two hours for their interactions with the platform. The data implies that CANVAS is a crucial instrument for students' educational endeavours, enabling them to easily access course materials and actively participate in virtual learning settings. The findings show that students' involvement with CANVAS varies from ten minutes to three hours. This variation in engagement time emphasises the necessity of understanding students' usage patterns and preferences when evaluating their attitudes towards LMS systems such as CANVAS in virtual learning settings. Nevertheless, it also emphasises the need to examine the variables that impact students' time distribution on the platform and techniques to enhance their involvement and educational achievements.

CANVAS enhances interaction, learning efficacy, and effective communication

Based on the research result (See Table 3), they generally used CANVAS to review the resources earlier by obtaining the material that the lecturer had previously provided by making the professional design of the course (99.15%), as well as checking the coursework that had been provided by the lecturer through CANVAS. The students also participated in the lecturers' virtual conversations on CANVAS. Based on this action, they can interact with the lecturers and the other students (93.22%) to convey their perspectives, share their opinions, and engage in a specific issue. As a result, they will be able to take part in more interactive learning activities using CANVAS. Furthermore, they (95.77%) can benefit from the virtual learning activities supplied by the lecturer on CANVAS before the Zoom session.

Table 3. CANVAS enhances interaction

No	Statements	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
1.	CANVAS facilitates interaction and communication between teachers and students.	37.29	55.93	5.93	0.85
2	The design of the course is professional.	52.54	46.61	0.85	0.00
3	The independent session on CANVAS aids my grasp of the topic prior to the Zoom Meeting.	34.75	61.02	4.24	0.00

In addition, the statistical study (See Table 4) demonstrates a clear agreement among participants on the beneficial impact of CANVAS on both learning effectiveness and communication within the educational setting. The data reveals that a significant majority of respondents, specifically 96.61%, agree or strongly agree that utilising CANVAS improves learning efficacy. It indicates a general recognition of its positive influence on understanding and memory retention. Moreover, 92.37% of participants concur or strongly concur that CANVAS enables efficient communication between instructors and students, underscoring its function as a dependable medium for promoting active involvement and cooperation. On the contrary, a small number of individuals (29.66% in total, who either agree or strongly agree) prefer studying courses using physical paper. However, the majority (70.34%, who either disagree or strongly disagree) prefer using CANVAS for their learning activities. These findings highlight the increasing recognition and dependence on digital platforms such as CANVAS to improve learning experiences and enable efficient communication in educational environments.

Table 4. CANVAS improving in learning efficacy

No	Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
		(%)	(%)	(%)	(%)
1	The use of CANVAS improves the efficacy of learning.	38.98	57.63	2.54	0.85
2	CANVAS allows lecturers and students to keep in touch effectively.	29.66	62.71	5.93	1.69
3	I like to study my courses on paper rather than on CANVAS.	7.63	22.03	65.25	5.08

Furthermore, numerous noteworthy insights can be discerned through the analysis of the data shown in Table 5, which explicitly evaluates the influence of CANVAS on enhancing learning effectiveness and efficiency. The educational resources and tasks supplied by professors on the CANVAS platform are highly significant. The study found that most participants concurred that the lecturer's presentation of resource materials and completion of CANVAS assignments substantially positively impacted their learning and comprehension of the course material. To be more precise, 98.31% of the participants expressed strong agreement with this statement, while only 1.69% indicated disagreement or strong disagreement. Students unequivocally affirm that the tools and assignments offered through CANVAS are valuable in enhancing their learning experience and comprehension of course material, thereby establishing CANVAS as a Learning Management System (LMS) that may enhance the efficacy of communication in education.

Moreover, the data indicates that a significant proportion of participants concur that engaging in CANVAS activities and discussions can serve as a source of motivation for furthering their understanding of the subject matter. More precisely, 98.30% of the participants agree or strongly agree with this statement, whilst only 1.70% disagree or strongly disagree. Students consider CANVAS a platform that promotes engagement, curiosity, and motivation through interactive activities and discussions. That condition leads to an improved learning experience and encourages students to delve deeper into course themes.

The research also indicates that most respondents feel that CANVAS is efficient and time-saving. More precisely, 96.61% of the participants strongly agreed with this statement, whilst only 3.39% expressed disagreement or severe disagreement. Students acknowledge the effectiveness and simplicity of utilising CANVAS to access course materials, finish assignments, and participate in learning activities, maximising their study time and simplifying their learning processes.

Table 5. CANVAS enhances learning effectiveness communication

No	Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
		(%)	(%)	(%)	(%)
1	The instructional materials provided by my lecturer, including videos, PowerPoint presentations, articles, and assignments on CANVAS, enhance my understanding of the course content and contribute to my learning progress.	61.02	37.29	0.00	1.69

2	Engaging in activities and discussions on CANVAS has the potential to motivate me to delve deeper into the subject matter.	38.98	59.32	0.85	0.85
3	CANVAS saves both effort and time.	37.29	59.32	2.54	0.85

To summarise, the evidence highlights the favourable influence of CANVAS on both the efficacy and efficiency of learning. Students view CANVAS as a beneficial tool that enriches their learning experiences by granting them access to resource materials and assignments, promoting motivation and engagement through interactive activities and conversations, and aiding efficiency and time-saving in their learning efforts. The findings emphasise the transformative impact of CANVAS on improving student learning outcomes and fostering a more interactive and effective learning environment.

CANVAS enhances language learning

The data (See Table 6) indicates that CANVAS is an effective platform for enhancing language skills and promoting student interest in reading. CANVAS is widely regarded as a catalyst for language practice, vocabulary growth, and pleasurable reading experiences across several domains. The results show that most respondents (97.46% combined agree and strongly agree) believe CANVAS is a good platform for practising their language abilities. CANVAS allows students to participate in language activities like writing projects, language exercises, or language-focused discussions. These activities help students build and strengthen their language competence.

Furthermore, an overwhelming majority of participants (93.22%, comprising those who agree and strongly agree) indicate that CANVAS effectively enhances their English vocabulary acquisition. CANVAS provides various resources, games, and learning materials that introduce students to diverse vocabulary phrases and concepts, ultimately enhancing their vocabulary knowledge and language skills. In addition, the research indicates that CANVAS enhances the pleasure of reading activities for students since 95.91% of participants collectively agree or strongly agree with this statement. It implies that CANVAS offers captivating and interesting reading materials, activities, or features that amplify students' curiosity and pleasure, cultivating a favourable reading atmosphere within the educational setting.

Table 6 CANVAS enhances language learning

No	Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
		(%)	(%)	(%)	(%)
1	CANVAS allows me to practice my language skills.	33.05	64.41	1.69	0.85
2	CANVAS helps me acquire new English vocabulary.	39.83	53.39	5.93	0.85
3	CANVAS helps make my reading activity more fun.	42.37	52.54	4.24	0.85

The research results emphasise that CANVAS plays a multifunctional role in improving language acquisition and fostering student interest in reading. The importance of this tool lies in its ability to support language practice, enhance vocabulary acquisition, and provide delightful reading experiences. It is crucial in promoting linguistic development and creating a positive

learning environment that facilitates language acquisition and reading comprehension. CANVAS takes an attractive and fetching design that grabs their consideration in VLE to give various features. Furthermore, the lecturer structured the learning modules so that students could easily access whatever material they required in the LMS. It indicates that the course design offered by the lecturers in CANVAS makes it easy for students to engage in learning activities. Aside from its simplicity of use, students perceived CANVAS as an excellent LMS for fostering an interactive VLE. The survey results indicate that students identified several useful features of CANVAS, as outlined in Table 6, which can enhance the learning experience and increase engagement.

CANVAS boosting students' confidence and motivation in a fun way

The outcome of the semi-structured interview reflects the students' acceptance of the LMS CANVAS, which allows the students to practice their language skills in a fun way and build their confidence. Moreover, they perceived that the design given by lecturers at LMS CANVAS was very good (See Excerpts 1 and 2).

Excerpt 1

When I use CANVAS as a tool for learning, I feel more confident and excited about learning because all of the materials are easily accessible. (S22)

Excerpt 2

What I like about the module/CANVAS is that I can understand the material better explained by the lecturer because when explaining the material, the lecturer uses full English, so I can repeat the material if I don't understand the meaning and also increase my vocabulary with enjoy learning. The CANVAS is very useful to me and keeps me motivated to learn so that can build my confidence. (S71)

Excerpt 1 describes a student's positive experience with CANVAS as a learning tool, emphasising increased confidence and excitement for studying. The student enjoys the platform's material accessibility, implying that CANVAS makes course materials, resources, and learning activities easier to access. This accessibility is expected to boost students' self-assurance in navigating the platform and engaging with course content, resulting in a more positive and empowered learning experience. Moreover, in Excerpt 2, another student expresses gratitude for CANVAS, highlighting its importance in improving comprehension and vocabulary learning. The student credits his better comprehension to the lecturer's use of comprehensive English explanations, which allow him to repeat and reinforce his understanding of the content. Furthermore, the student mentions that CANVAS motivates them to learn, which boosts their confidence. The data shows that CANVAS provides a supportive and inspiring learning environment, encouraging active participation with course content while instilling a sense of accomplishment and confidence in one's talents.

In addition, CANVAS activities can increase their learning motivation by allowing them to participate in virtual discussions about such a topic. This activity enables the student to share their thoughts or opinions on the topic and piques their interest in learning more about it. They are encouraged to be more interactive in conveying the students' thoughts through the learning session by participating in this exercise (See Excerpts 3 and 4).

Excerpt 3

Engaging in CANVAS actions and debates serves as a catalyst for my motivation to go deeper into the subject matter. (S38)

Excerpt 4

I like CANVAS because it is different from other teaching media where we can do a lot of activities, answer lots of interesting questions, hear a song before we continue learning the material, see a video, and sometimes there's an optional quiz to make me less bored to learn and that really motivates me to learn. (S61)

Excerpt 3 emphasises the importance of CANVAS exercises and debates in increasing student motivation and understanding of the subject matter. The student discusses using CANVAS as a trigger for their motivation to dive deeper into the subject. It implies that CANVAS's interactive character, particularly its potential to facilitate debates and activities, piques students' curiosity and interest. By allowing for active participation and critical thinking, CANVAS enables students to engage with course content actively, resulting in a better comprehension and appreciation of the material. Furthermore, Excerpt 4 highlights students who express gratitude for the distinctive attributes of CANVAS that set it apart from conventional teaching approaches. The students derive pleasure from the diverse range of activities offered on CANVAS, encompassing question answering, music listening, film watching, and optional quiz participation. These interactive components help to alleviate the tedium of conventional learning methods and sustain the student's attention and involvement. CANVAS stimulates students' engagement in their educational journey. It encourages them to actively participate and take responsibility for their learning by providing a range of learning experiences and possibilities for discovery.

In summary, these extracts highlight CANVAS' motivational impact in encouraging student involvement and deepening understanding of course content. CANVAS fosters a dynamic and stimulating learning environment that encourages active engagement and exploration through interactive activities, discussions, and different learning experiences. Based on the data, CANVAS, in turn, boosts student motivation, resulting in a more enriching, fun learning experience.

Perceived ease of use (PEOU)

Perceived ease of use (PEOU) is essential to the TAM framework. It consists of three interconnected sub-themes: CANVAS Usability in Mobile Learning Environments, CANVAS User-Friendly Design, and CANVAS Seamless Navigation and Accessibility. These factors jointly impact Students' attitudes toward the ease of interacting with and utilising technology. Within LMS, such as CANVAS, these sub-themes significantly impact students' attitudes and behaviours towards the platform. Analysing each sub-theme separately can better understand how CANVAS promotes user engagement and improves the overall learning experience in mobile environments.

CANVAS usability in mobile learning environments

Regarding the questionnaire data, the students also felt that CANVAS is a simple LMS for interactive virtual learning. Table 7 shows students' attitudes on how easy it is to use CANVAS for interactive virtual learning. As seen in Table 7, most students (94.92%) found it beneficial to use CANVAS as an LMS in a VLE, particularly for submitting lecturer-assigned work. Furthermore, 27.97% of the Students said that CANVAS was a challenging learning application on their mobile phones. Meanwhile, 72.03% said accessing LMS CANVAS through their mobile phone was fine. The students had a steady data connection on their mobile phones, allowing them to access the LMS quickly. It means users can simply access the CANVAS program on their

mobile phones and interact with the learning activities provided by the lecturers on CANVAS from any location.

Table 7. CANVAS usability in mobile learning environments

No	Statements	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
1.	CANVAS is simple to use, particularly for submitting assignments.	31.36	63.56	4.24	0.85
2	CANVAS is difficult to use as a mobile learning tool.	12.71	15.25	22.88	49.15
3	CANVAS is difficult to use because of the slow-speed internet on my mobile.	7.63	33.05	47.46	11.86

The data indicates that CANVAS is widely regarded as a usable and easily accessible LMS for interactive virtual education. Many students perceive CANVAS as a beneficial tool for augmenting their learning experience, particularly due to its mobile accessibility. CANVAS enables students to conveniently access all course materials and engage in discussions from anywhere. It highlights the significance of LMS platforms like CANVAS in enabling efficient VLEs and bolstering students' academic achievements.

CANVAS user-friendly design

The interview results with a semi-structured format indicate students' acknowledgement that CANVAS provides various valuable elements that appear to be commonly accessible to them (See Excerpts 5, 6, 7, and 8). Exploring the user-friendly design of LMS CANVAS yields numerous critical conclusions depending on the presented data. Students routinely praise and appreciate the platform's user-friendly structure and organisation, as shown in Excerpts 5 and 8. They complement CANVAS's tidy and structured design, emphasising the clarity and organisation of modules that deliver course information in a clear and readily navigable format. This planned method guarantees that students engage in fascinating and instructive activities without becoming overwhelmed or disengaged, resulting in a more engaging learning experience.

Excerpt 5

I like the design it's neat and easy to understand. The modules are very structured and provide activities that don't bore students. (S1)

Excerpt 6

I like CANVAS design, it's simple and useful, and it makes me want to continue to open CANVAS and study there, it's a modern learning model and makes it easier for me to access course material. (S44)

Excerpt 7

It's very easy to use, structured, and organized, so, I can work on tasks comfortably. (S47)

Excerpt 8

It's simple and very well-structured. From the introduction to the main material, there is also an intermezzo, I like it. (S64)

Furthermore, students commend CANVAS' design for its simplicity and ease of learning, as shown in Excerpts 6 and 7. They found the platform's interface user-friendly, describing it as basic, useful, and straightforward. This simplicity motivates students to continue learning using CANVAS, promoting a sense of ease and confidence in completing tasks and assignments. Moreover, Excerpt 6 emphasises CANVAS' accessibility and modernity, with students describing the platform as a contemporary learning approach that allows for simple access to course materials. CANVAS' implementation of modern features and functionalities corresponds with students' expectations for digital learning platforms, contributing to its user-friendly design and improving the learning experience. Overall, the statistics highlight the importance of CANVAS's user-friendly design in improving students' learning experiences. CANVAS allows students to engage with course materials in a structured, intuitive, and modern manner. This user-friendly strategy encourages student involvement and creates a positive learning atmosphere conducive to academic success in online education.

CANVAS seamless navigation and accessibility

The excerpts demonstrate the concept of seamless navigation and accessibility in LMS module design. Students appreciate the simplicity with which they may navigate through the courses, as demonstrated in Excerpt 9, where they find the features and symbols simple. The data shows that the interface has been developed with the user in mind, allowing students to easily navigate the platform (See Excerpts 10 & 11).

Excerpt 9

The module's functionality and symbols are straightforward to use. (S15)

Excerpt 10

The arrangement is quite appealing. Each module has well-organized material with a specific title and caption, which comes in handy whenever I need it. (20)

Excerpt 11

It's also simple to use and navigate, any time and anywhere (28)

Furthermore, Excerpt 10 emphasises the well-organised presentation of information inside the courses, with precise titles and subtitles that help students find important knowledge. This systematic information presentation method improves clarity and allows students to access the information they need easily, boosting learning efficiency. Excerpt 11 further emphasises the module's accessibility, stating that students can access and operate it anytime and anywhere. Students can interact with the platform whenever they choose, whether at home, on the go, or in other learning venues. In summary, the concept of Seamless Navigation and Accessibility in LMS Module Design emphasises the necessity of creating modules that are simple to explore, organise, and access. LMS platforms may improve the user experience, promote learning efficiency, and help students succeed by prioritising seamless navigation and accessibility in module design.

Discussion

This study examines students' attitudes toward using CANVAS for collaborative virtual learning environments (VLE). CANVAS is considered a valuable tool by Santiana et al. (2021) and offers various capabilities for students and lecturers (Pujasari & Ruslan, 2020). The research findings highlight students' positive appraisal of CANVAS, emphasizing its user-friendly nature

and effectiveness in enhancing interactive VLE. CANVAS facilitates diverse functionalities for virtual learning activities, as evidenced by student's active engagement in reading modules, discussions, and completing tasks (Hartholt et al., 2020; Santiana et al., 2021; John, 2021). The platform's features, including dashboards, calendars, and collaboration tools, enable lecturers to enhance their teaching and learning (Wicaksono et al., 2021; Jusuf, et al., 2021; Ataby, 2021). Lecturers should carefully select an LMS that enhances collaboration features, such as discussion forums and document sharing (Adzharuddin & Ling, 2013), to improve the educational experience.

Nevertheless, the present research results highlight that most students concur that CANVAS is a superb tool for enhancing interactive VLEs. John (2021) and Garcia et al., (2021) state that CANVAS has more great features than other frequently used e-learning, making this one of the greatest LMSs. In addition to the multiple features provided by CANVAS, students believe that CANVAS is a user-friendly LMS that facilitates both teaching and learning processes. It is consistent with the assumption that it is a student success platform with some simple LMS features (Chen et al., 2021; Khatser & Khatser, 2022). Furthermore, adopting CANVAS is considered advantageous because it allows for ease of use of course content (Pujasari & Ruslan, 2020; Santiana et al., 2021).

The analysis of the data underscores the significant impact of utilizing the CANVAS LMS on students' engagement, supported by extensive usage durations (Fathema & Akanda, 2020; Pujasari & Ruslan, 2020; Garcia et al., 2021; Santiana et al., 2021; Khoeri et al., 2021). CANVAS is recognized for enhancing student engagement and learning effectiveness, particularly through fostering effective communication in platform discussions (Santiana, et al., 2021; Fathema & Akanda, 2020). It is an excellent platform for collaborative and interactive virtual learning environments, offering modern learning methods and facilitating connectivity and collaboration (Santiana, et al., 2021). CANVAS's diverse learning tools enhance communication between lecturers and students, promoting engagement and participation in virtual learning activities (Edmunds, et al., 2012; Fauzi et al., 2020; Desai, 2020). By encouraging active participation, CANVAS motivates students intrinsically, fostering competence and autonomy in learning (Fandio, et al., 2019).

In the future, it is essential to employ new technology effectively to foster student engagement in practical tasks, collaboration, and interaction (Connell, 2021). CANVAS facilitates knowledge-sharing between instructors and students (Ahtinen, et al., 2023; Yang & Baldwin, 2020), significantly influencing students' learning achievements in virtual education. This study's results support this assertion, indicating that student's language skills and vocabulary improved through CANVAS use in online language learning and comprehension of course content. It implies that CANVAS generally enhances students' learning results.

Students can enhance their language proficiency using CANVAS, as teachers have saved study materials in the CANVAS LMS. In addition, lecturers can employ a range of CANVAS functionalities to provide an optimal learning atmosphere, thereby enhancing students' self-confidence (Rahmah, 2021; Yaprak, 2022). Self-confidence is fostered by direct interaction between students and their peers and lecturers. They exhibit greater confidence in articulating their ideas using CANVAS instead of expressing them directly. Students exhibit greater boldness in presenting diverse viewpoints on the subject matter based on the material given (Santiana, et al., 2021).

In addition, the data also revealed that CANVAS is associated with Perceived Ease of Use (PEOU). It is corroborated by the assertion that CANVAS can be seamlessly utilised with mobile phones, making it functional in mobile learning environments. This result is supported by

Edmunds et al. (2012) and Apriani et al., 2022, who suggest that students believe that using ICT (in this case, CANVAS) improves their learning to be simpler. It means that, besides providing numerous capabilities that lecturers and students can use during virtual learning, students can simply handle CANVAS. They can use their mobile phone to launch this LMS and access it anywhere and anytime.

Furthermore, students find CANVAS's layout appealing, allowing them to locate the information they require in this LMS quickly. The results demonstrate a high level of agreement among students regarding the user-friendliness of CANVAS as an LMS for interactive virtual learning. Based on the research results, most students believe CANVAS is straightforward to use, particularly when submitting assignments. The data shows that students see CANVAS as an accessible and successful platform for engaging with course materials and completing tasks. Moreover, CANVAS's placement in the User-Friendly Design category highlights its intuitive interface and comprehensive capabilities, contributing to its simplicity and efficacy in facilitating virtual learning settings. It correlates with a study by Rahmah (2021) and Santiana et al. (2021), which stressed the relevance of user-friendly features in boosting students' engagement and happiness with LMS platforms. Therefore, the data supports the assumption that CANVAS delivers a user-friendly design that helps students and teachers navigate the platform efficiently and successfully engage with learning materials.

In addition, the data also revealed that CANVAS is associated with Perceived Ease of Use (PEOU). It is corroborated by the assertion that CANVAS can be seamlessly utilised with mobile phones, making it functional in mobile learning environments. This result is supported by Edmunds et al., (2012) and Apriani et al., (2022), who suggest that students believe that using ICT (in this case, CANVAS) improves their learning to be simpler. It means that, besides providing numerous capabilities that lecturers and students can use during virtual learning, students can simply handle CANVAS. They can use their mobile phone to launch this LMS and access it anywhere and anytime.

Students widely appreciate CANVAS's layout, finding it easy to navigate and locate necessary information swiftly (Mpungose & Khoza, 2022; Pujasari & Ruslan, 2020; Santiana et al., 2021). The research reveals a consensus among students regarding CANVAS's user-friendliness, particularly in assignment submission. CANVAS is perceived as accessible and efficient, aligning with its classification as a platform offering seamless navigation and accessibility (Parveen et al., 2023; Schauer et al., 2023). The platform's design prioritizes user-friendliness and streamlined access to resources, supporting smooth navigation for task completion (Garcia et al., 2021; Santiana et al., 2021; Khoeri et al., 2021; Parveen et al., 2023; Schauer et al., 2023). Furthermore, CANVAS's focus on accessibility ensures usability for all users, regardless of technological proficiency or accessibility needs, through features like alternative text for images and keyboard navigation options (Pujasari & Ruslan, 2020).

Conclusion

This research delves into students' attitudes toward the LMS CANVAS within VLE. Employing a mixed-methods approach, it surveyed 118 EFL students enrolled in the TELL course, gathering data through surveys and semi-structured interviews. Utilising the TAM framework, researchers analysed the data to assess students' attitudes. The findings, categorised into Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), shed light on various aspects of students' experiences with CANVAS. Under PU, students highlighted CANVAS's role in engagement time, enhancing interaction, learning efficacy, effective communication, language learning, and

boosting confidence and motivation. On the other hand, PEOU encompassed CANVAS's usability in mobile learning environments, user-friendly design, and seamless navigation and accessibility. This comprehensive exploration underscores the significance of CANVAS in facilitating effective and engaging virtual learning experiences, emphasising its value in enhancing both learning outcomes and user experience.

Future research should focus on longitudinal studies to track the evolution of CANVAS usage and its long-term impact on learning outcomes. It is recommended to investigate the influence of lecturers on CANVAS usage and its correlation with student engagement and success. Optimising CANVAS for mobile devices through usability testing and interface redesigns could improve accessibility and user experience. Integrating emerging technologies like artificial intelligence and virtual reality into CANVAS could lead to innovative learning experiences. Comparative analyses between CANVAS and other LMS could provide insights into platform strengths and weaknesses. These research directions can deepen our understanding of CANVAS's role in virtual learning and inform strategies for enhancing student engagement and learning outcomes.

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The authors declare that there is no conflict of interest in this work.

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