



P-ISSN 2355-2794
E-ISSN 2461-0275

Enhancing Language Learning: EFL Teachers' Insights on Online Autonomous Learning Activities

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Abstract

Students can improve their skills, broaden their knowledge, and practice their language using online language learning resources. These resources include several activities designed to meet students' requirements, promote self-learning, and fit their learning preferences. This study investigates EFL teachers' perceptions of students' performance in online self-learning activities during laboratory classes. They reflect on how these activities can excite students' interest, motivate them, and involve them. The research addresses two questions: (a) what teachers think about the importance of e-learning laboratory activities in language learning, and (b) how these activities can promote personalized and active learning. The researchers employed a survey, interviews, field notes, reflections, and class recordings to describe, examine, and interpret the data through narrative analysis. The results show encouraging trends in engagement, motivation, interest, time, independence, and future use. Most students had strong critical thinking skills and enjoyed the self-completion of the assignments. Few learners became demotivated and lost interest owing to the absence of grading, seriousness, or effective surroundings. Additionally, the research shows that compared to traditional face-to-face learning, online learning gives teachers more time and opportunities to update their methods and help students in new ways.

Keywords: Active learning, e-learning, motivation, student-centered learning.

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Citation in APA style: Al Shlowiy, A., & Raj, P. (2024). Enhancing language learning: EFL teachers' insights on online autonomous learning activities. *Studies in English Language and Education*, 11(3), 1596-1615.

Received February 15, 2024; Revised May 22, 2024; Accepted August 22, 2024; Published Online September 30, 2024

<https://doi.org/10.24815/siele.v11i3.37418>

1. INTRODUCTION

Students can learn language through online documents, videos, tasks, and lessons (Mayer, 2009). Educators have carefully prepared these forms to assist students in practicing, expanding their knowledge, and developing their language skills. Such forms include various activities and exercises that encourage self-learning based on the preferences of students with different learning styles (Lai et al., 2018). This means that everyone has a unique approach to learning the language. Online learning can provide students with numerous resources for reviewing their lessons, which aids in the self-learning process. As a result, students can identify areas of weakness, track their progress, and improve their learning strategies. (Lai et al., 2018). This supports active learning strategies (Oga-Baldwin et al., 2017).

Online learning helps teachers to avoid paperwork and the hassles of printing and correcting manually. Since the learning activities are online, feedback and correction are immediate, which leads teachers to focus on managing the learning content (Al Shlowiy, 2022). Traditional teaching in classrooms cannot sustain self-learning practices and active learning activities for all students due to the shortage of time and the size of the class (Noels et al., 2019).

Indeed, the nature of education has changed since the COVID-19 pandemic. Due to this phenomenon, online learning has become increasingly prevalent in schools around the world. The pandemic forced many people to use online tools and platforms in their daily lives (Al Shlowiy, 2022). The forced use of technology led many opponents of online learning to change their views, allowing it to grow rapidly, attract more users, and overcome challenges.

Many physical venues are now being supplanted by online ones for training, testing, and learning. Teachers can use online learning to assess students' issues, limitations, and requirements. Teachers seek to undertake practical activities to increase the learning process, attain learning outcomes, and meet the needs of their students. Course activities give teachers extra opportunities to coach students, monitor progress, and create a supportive environment, helping students develop autonomy, self-efficacy, motivation, and engagement.

Doing so might be facilitated by various productive online technologies such as Articulate Storyline, Adobe Captivate, and Active Presenter. Ryan and Deci (2020) suggest investigating the potential applications of educational tools in engaging and motivating students. Additionally, they recommend undertaking qualitative research to clarify the function of educational innovations in attracting students' attention and engaging them in learning activities. Such a suggestion has not yet been effectively covered, particularly online. Likewise, EFL students' self-learning and engagement in online learning have yet to be adequately addressed.

This study explores EFL teachers' perceptions of students' performance in online activities, aiming to assess the efficiency of online self-learning introduced in laboratory classes. Teachers' reflections provide insights into whether these activities effectively engage, motivate, and increase students' interests in language learning. The study also addresses the following key research questions to fill the existing gaps:

1. What do teachers think about the role of online learning laboratory activities in language learning?
2. How can these activities support self-learning and active learning?

2. LITERATURE REVIEW

2.1 Self-Determination Theory and the Technology Acceptance Model

Several theories are used to discuss issues related to the classroom based on the literature on education, such as the Self-determination theory (SDT) (Deci & Ryan, 1985) and the Technology Acceptance Model (TAM) (Davis, 1989). These two theories provide this study with different perspectives on language learning contexts. On the one hand, the SDT aids in understanding students' autonomy, motivation, and psychological needs such as confidence and self-esteem. The TAM, on the other hand, aids in explaining the behavior and intentions of technology users through the use of two factors: perceived usefulness (PU) and perceived ease of use (PEU).

These theories consider a variety of factors that influence language learning, including motivation (Ushioda & Dörnyei, 2009), self-efficacy (Bandura, 1997), autonomy (Littlewood, 1996), engagement (Heckhausen, 1991), foreign language enjoyment (Dewaele & MacIntyre, 2014), foreign language anxiety (Mercer, 2019), active learning (Prince, 2004), and learning contexts (King & Ganotice, 2014). These factors are classified as external (teacher support) and internal (self-management) (Pan & Chen, 2021).

Self-Determination Theory (SDT) considers motivation a key focus of students' behaviors and desires to learn the language. Ushioda and Dörnyei (2009) defined motivation as an "individual students' motive to make certain academic decisions, participate in classroom activities, and persist in pursuing the demanding process of learning" (p. 4). SDT distinguishes between intrinsic motivation, which is the desire to engage with a learning task for its own sake, and extrinsic motivation, which is the desire to perform the task to obtain rewards like money, grades, praise, or fame.

Although both types of motivation can positively influence students' engagement, performance, and achievement (Froiland & Oros, 2014), intrinsic motivation is more effective in supporting interest, personal enjoyment, and positive feelings to learn in the long term (Ainley, 2012; Dewaele & MacIntyre, 2014). It is enhanced by students' positive feelings of autonomy, relatedness, and competence, which are considered the three main psychological needs of SDT (Deci & Ryan, 1985). While intrinsic motivation is the prototype of autonomy (Deci & Ryan, 2000), it might become extrinsic motivation by internalizing the external regulation of behaviors including rewards, punishment, and deadlines (Jiang & Zhang, 2021).

Ryan and Deci (2017) defined autonomy as the need for students to exercise activity and form their learning based on their feelings, beliefs, values, and interests. As the first psychological need, autonomy plays a crucial role in maintaining motivation and wellness. The second psychological need is competence, which means the students' feeling of effectiveness and capability. The third psychological need relies on the relatedness in which students have social connections and belongingness. SDT highlights fulfilling students' needs for autonomy, competence, and connection by offering learning opportunities that engage their interests and challenge their responsibility (Ryan & Deci, 2020).

Enhancing feelings of autonomy, competence, and relatedness supports not only motivation but also engagement. Ryan and Deci (2017) stated that students' perceptions of competence, autonomy, and relatedness can improve their engagement. As a part of SDT, learners' engagement is extremely and positively connected with

their motivation (Oga-Baldwin et al., 2017; Reeve, 2012). While motivation means the interior hidden drive and willingness to learn, engagement means the exterior noticeable performances that depend on the drive and willingness (Eccles, 2016). Engagement also develops behaviors (Peng, 2021), self-efficacy (Schunk & Mullen, 2012), interest (Ainley, 2012), personal investment (Maehr & Braskamp, 1986), social and extracurricular activities (Snijders et al., 2020), achievement goals (Anderman & Patrick, 2012), educational settings (Jiang & Zhang, 2021), and emotions (Pekrun & Linnenbrink-Garcia, 2012).

Fredricks et al. (2004) defined engagement as anything students do to extend their knowledge. This includes their actions, thoughts, feelings, and interactions. Furrer and Skinner (2003) look at engagement as desirable behaviors of “students’ active, goal-directed, flexible, constructive, persistent, focused interactions with the learning environment” (p. 149). It is a multifaceted concept of behavioral engagement including paying attention in class and completing assignments, emotional engagement including enjoyment and interests and cognitive engagement including thinking and analyzing (Fredricks et al., 2004).

2.2 Self-Determination Theory and Student Engagement

Many studies employed the lenses of Self-Determination Theory (SDT) to examine students’ engagement and motivation. Noels et al. (2019) examined the claim that students are motivated and engaged in learning when they have a feeling of autonomy, competence, and relatedness in the learning environment. They followed 162 EFL students across one semester longitudinally to measure their motivation and engagement. They found that self-determined motivation increased over the semester, counteracting declines in engagement. Early engagement boosted later motivation, while early motivation influenced later engagement.

Another study by Oga-Baldwin et al. (2017) examined how to develop intrinsic motivation through students’ interaction with the environment. They surveyed 515 EFL students at different times of the academic year in Japanese schools. They measured students’ perceptions of engagement, self-reported motivation, teacher support, and need satisfaction. While teachers evaluated students’ motivation, some external researchers observed students’ engagement. The findings show a helpful relationship between motivation, the learning environment, and engagement. The observation revealed significant links between students’ self-reported engagement and motivation.

A mixed-method study was conducted by Dincer et al. (2019) to investigate how learning contexts, personal psychological needs, engagement, and academic achievements are related. When 412 Turkish EFL students met their psychological needs, they were greatly engaged with high achievements. In addition, the interviewing students found that positive social environments correlated with valuable teachers’ support of autonomy, which predicted their need satisfaction and facilitated their engagement. Students’ perception of their teachers’ support satisfied their needs and boosted their self-determined engagement. They recognized the importance of teachers’ support of their needs, engagement, and accomplishments.

These studies prove the role of teachers in supporting students’ autonomy, motivation, and engagement in learning environments. Students’ positive self-perceptions can be promoted in a loving and encouraging classroom environment, such

as one with teacher-student interactions, which will further improve students' involvement and academic results (Dincer et al., 2019; King & Ganotice, 2014).

Meanwhile, Mystkowska-Wiertelak (2020) examined the role of teachers and found that teachers developed students' behavioral, emotional, cognitive, and social engagements. However, teachers' concentration goes into students' behavioral engagement more than other components. Pan and Chen (2021) studied how EFL teachers' support contributes to 197 students' self-directed learning beyond the classroom in China. The use of questionnaires on teacher support, self-efficacy, and self-directed learning showed a valuable relationship between teacher-emotional support and learners' self-directed learning.

By the same token, the studies indicate the role of enjoyment in stimulating students' motivation, sustaining engagement, and developing the learning environment (Mercer & Dörnyei, 2020). Enjoyment is a positive emotion in supportive environments with a low-anxiety community of colleagues and teachers (Mercer, 2019; Pekrun & Linnenbrink-Garcia, 2012). Guo (2021) used the 'Enjoyment Scale' and 'Learner Engagement Scale' to assess the influence of enjoyment on the engagement of 707 Chinese EFL students before interviewing 28 of them. The results show that enjoyment was positively correlated with engagement. Students who enjoyed learning more were socially active and had less boredom and absenteeism.

2.3 Technology Acceptance Model and the Role of Technology in Language Learning

Moving to the second theory, the Technology Acceptance Model (TAM) is considered the best indicator of how much students would use technology to meet their learning goals (Pan & Chen, 2021; Teo, 2015). To explain how humans use technology, Davis (1989) established the TAM, which is based on Fishbein and Ajzen's (1975) Theory of Reasoned Action. Davis believes that individuals' intentions and behaviors related to technology use are influenced by their perceived usefulness (PU) and perceived ease of use (PEU). According to him, PEU refers to any perception associated with using technology, whereas PU represents learners' projected overall outcome of adopting technology. Therefore, self-directed learning can be aided by directly increasing students' PU and PEU.

Examining the use of technology to learn the language beyond the classroom was the focus of Lai et al. (2018), who investigated the types of learning experiences and the influencing aspects in engaging EFL learners. Students identified three different kinds of technological experiences that were impacted in several ways by different support and attitude elements. The results indicate that learners' PU of the technological experience influenced instructional-oriented technological experiences, while their PUE of the technological experience influenced only entertainment-oriented technological experiences. Various elements influenced social-oriented technological experiences. In addition, these factors differ based on learners' proficiency levels. Thus, it is significant to employ numerous methods to accommodate various forms of technology-related encounters.

Pan and Chen (2021), mentioned above, also studied how technology acceptance might mediate the teacher support and self-directed language learning of Chinese EFL students. The findings show that PEU employed an indirect stimulus on the self-directed learning of students. They found that technological self-efficacy was a

mediator between teachers' support, affection, behavior, and students' self-directed learning. The external factors, including teacher support, and the internal factors, including technology acceptance and technological self-efficacy, develop both inherent and extrinsic motivation.

The variables of TAM can help to understand the role of motivation in students' use of online technologies. [Romero-Frías et al. \(2023\)](#) studied how motivation characterizes e-learning settings, enhances participant satisfaction, and influences their relation to technology acceptance variables. They found that students have higher levels of intrinsic motivation than extrinsic motivation, although the two can complement one another. Intrinsic motivation is only sustainably related to variations in technology acceptance. However, both types contribute to various levels of engagement and participation of students, but in various ways.

The teachers' role is essential in supporting students' PU and PEU and their self-directed learning and technological self-efficacy ([Pan & Chen, 2021](#)). [Lai et al. \(2017\)](#) studied teachers' influence on EFL students' behavior and use of technology in two countries. They examined 190 in Hong Kong and 228 in the USA. They attempt to understand the psychosocial factors and cultural differences in the ways that teachers influence their students' independent use of technology for learning outside the classroom. The findings show that teacher capacity support consistently had the greatest impact on students' self-directed technology use in both cultures. The teacher's emotional and behavioral support were important predictors for Hong Kong students but not for US students.

Overall, SDT and TAM play an important role in learning environments, students' motivation, and their engagement. Both theories focus on how students are influenced by social and cultural elements and how effectively they perform ([Guo, 2021](#); [King & Ganotice, 2014](#)). Such positive environments support students' self-learning and maintain their engagement and motivation for a long time ([Mercer, 2019](#); [Reeve, 2012](#)). This also facilitates active learning with high thinking skills ([Prince, 2004](#)) and self-regulated learning with self-motivation, self-organizing, self-monitoring, and self-evaluation ([Zimmerman, 1990](#)).

Autonomous learning, self-directed learning, personalized learning, and the like are different terms for the same meta-cognitive concept that transfers learning responsibility from teachers to students and encourages them to participate enthusiastically in activities. This concept requires students to discipline themselves, organize their time, follow the course structure, and expand their knowledge. Students also should compensate for any lack in the learning process, such as the lack of feedback. Technological tools and resources can assist them in achieving these goals ([Anderman & Patrick, 2012](#)) and conducting their tasks depending on their abilities, perceptions, and higher "technological self-efficacy" ([Pan & Chen, 2021](#)).

3. METHODS

This study follows [Wolcott's \(1994\)](#) three levels of qualitative research: description, analysis, and interpretation. This approach allows for deeper exploration beyond the data's surface, helping researchers navigate data limitations while maintaining active engagement in the analysis process.

3.1 Context

The study took place in the Preparatory Year Program (PYP) at a Saudi university, following the CEFR framework and using the *Unlock 3 Textbook* series by Cambridge University Press. The program operates on an eight-week quarter system, with B1-level students attending eight classes each for listening, speaking, reading, and writing skills, plus a weekly e-learning lab class. Laboratory teachers supervise and assist as needed. Students were provided with an interactive online platform to promote active and self-learning. The syllabus outlines four units per quarter, each taught weekly, with e-learning classes focused on reviewing and practicing the week's unit through self-learning and self-assessment activities.

3.2 Participants

Fifty-seven students, as silent participants under the observation, were Saudi males with a mean age of 18. They are intermediate level (B1) based on the CEFR. The eleven teachers were male, aged 36–57, with 10–25 years of experience teaching English. They have different qualifications in language education and come from different countries to teach EFL in Saudi Arabia.

3.3 Design

During the lab class, students engaged in additional learning activities delivered via Blackboard using the Articulate Storyline 360 tool. These activities mirrored textbook exercises and aligned with the objectives of the four learning units. Each activity featured various question types, including True/False, Fill-in-the-blank, Matching Drag-Drop, Matching Drop-down, and multiple-choice. Figure 1 illustrates the different question formats used in the practice activities (please see next page).

3.4 Procedures

The researchers recruited two different sections during the academic year 2023. For each section, they attended a weekly class to observe students and write down notes for the entire quarter. After each e-learning class, they downloaded the blackboard records of the class that showed what every student did in the class. Both researchers reflected on the observations and discussed the downloading sheets. At the end of the quarter, they requested other teachers to comment on the efficiency of the laboratory practice activities. The researchers prepared a short survey on Google Forms to be shared with 11 teachers, who also supervised other e-learning classes, to enrich the data and obtain a better understanding of students' performance. The Appendix includes a list of questions. Seven teachers responded to the questions and shared their reflections. A semi-structured interview was later conducted with three of the seven respondents to discuss and reflect on their answers.

3.5 Data Collection and Analysis

Data collection employed surveys, interviews, observation, field notes, class records, and reflection. Using multiple methods in qualitative studies assisted

researchers in describing, analyzing, and interpreting the behavior of these identified students (Wolcott, 1994). This is also a triangulation of data that ensures the trustworthiness of the study (Lincoln & Guba, 1985). These three aspects of research—description, analysis, and interpretation—by Wolcott (1994) led to careful management and classification of data before the interpretation process. This requires moving up and down in the data looking for patterned regularities to allow the narrative analysis and show results in tables, charts, or figures. Wolcott (1994) advised researchers to interpret this information using literature, personal reflection, or theoretical perspectives.

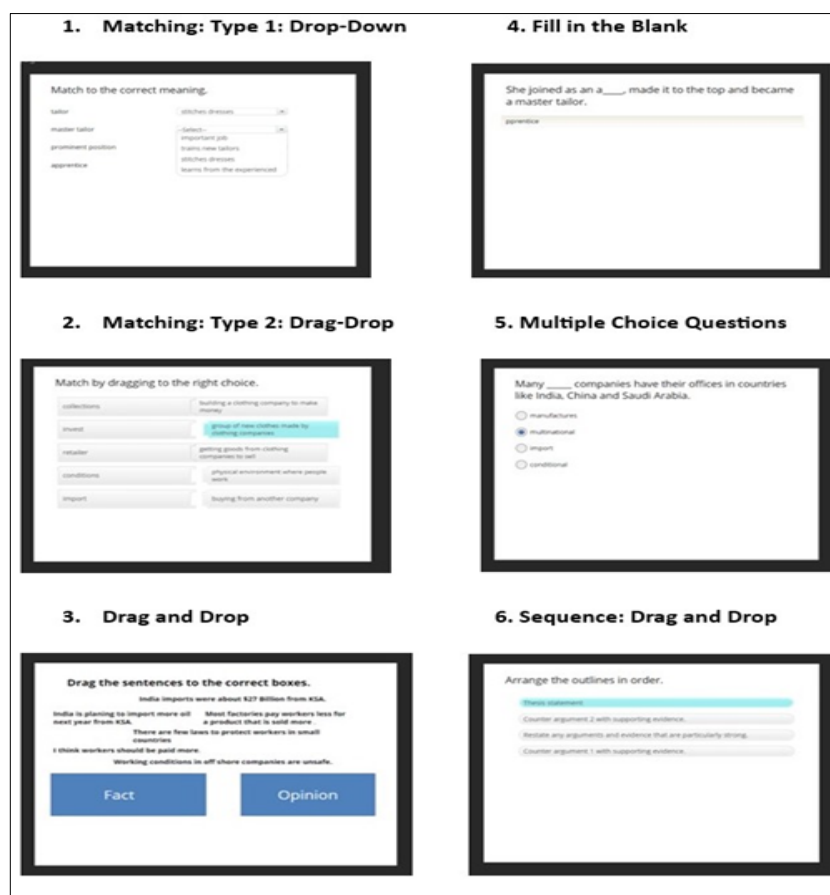


Figure 1. Questions used in e-learning class activities.

4. RESULTS AND DISCUSSION

4.1 Results of the Survey

This section reports the findings of the teachers' survey. It displays the main patterns in the figures to visualize the models that developed in their responses. This includes categories of completion, time, difficulty, participation, assistance, usefulness, and future use before interpreting them with other data in the discussion section.

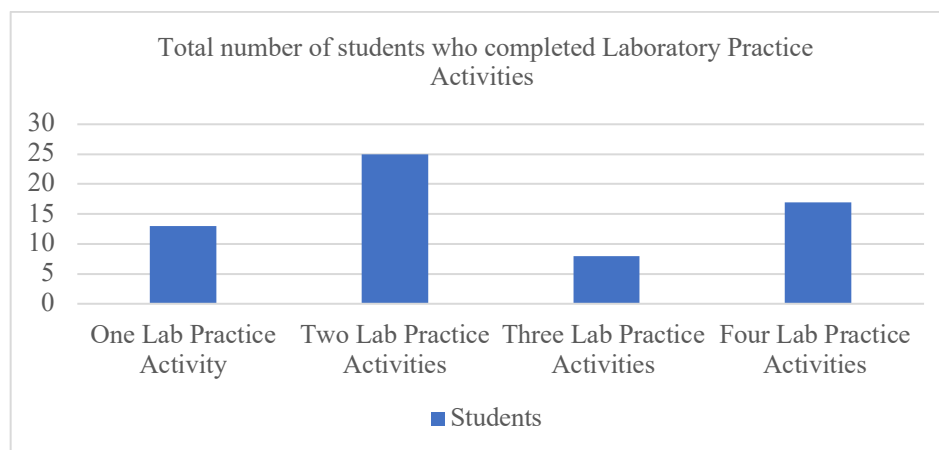


Figure 2. Number of students who completed the activities.

Figure 2 shows the number of students who completed each laboratory activity. Overall, 13 out of 57 students completed the first laboratory practice, but 25 students finished the second practice, the highest number. Then, the number came down to less than ten for the third one, the lowest number. Seventeen students completed the last activity. However, the records showed that all students started every activity and perhaps answered some questions, but they neither completed it nor submitted it. They might begin the activity simply due to the attendance policy as they were required to attend two e-learning classes at least and might be absent for a certain number of hours during a quarter. As a result, they decided not to come to the laboratory class as it involved only self-learning activities.

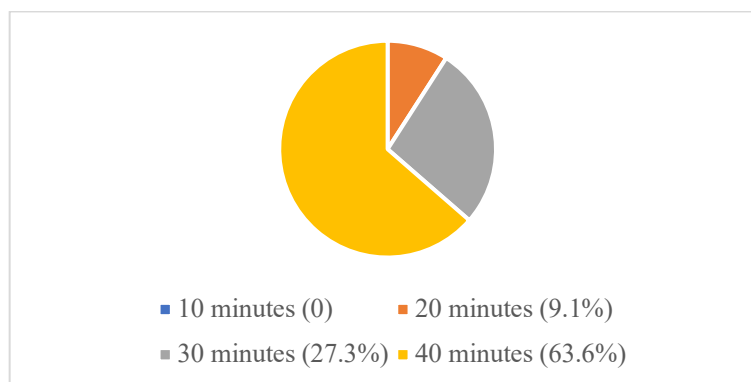


Figure 3. Time taken to complete one laboratory practice activity.

The records showed that about two-thirds of the students spent about 40 minutes, which is most of the class period, in completing the activity. While a quarter of the students completed the task in 30 minutes, about 9% of the students could complete it in 20 min. This could be attributed to their mastery of the learning content in which most students completed the tasks within the class time. Otherwise, maybe they were in a hurry or not interested in doing them. These records include the submission of the four activities without students who did not complete the tasks.

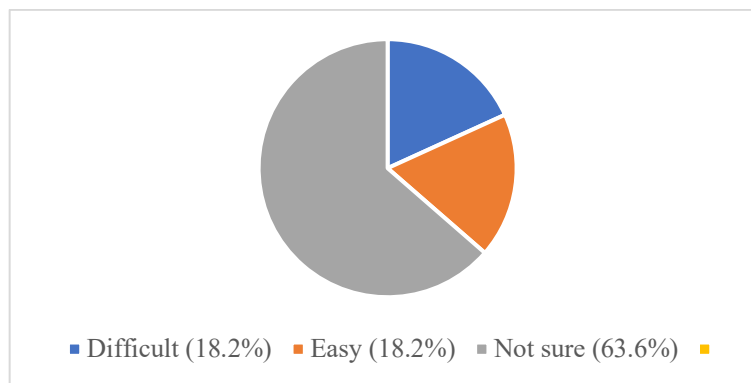


Figure 4. Level of difficulty.

Figure 4 shows the teachers' answers about the level of difficulty of the activities. Some teachers felt that the activities were difficult. They might have felt the content was difficult for students because many students did not submit the activities. Some teachers thought the activities were easy because most students finished early. On the other hand, about 63% of the teachers were not sure to categorize the content of the activities as difficult or easy.

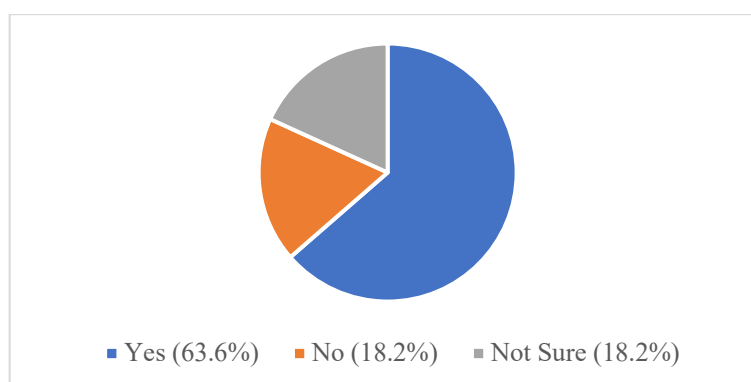


Figure 5. Participation of students.

Figure 5 demonstrates that most teachers felt that students were actively involved in the laboratory practice activities. Some teachers did not agree with that, while others were not able to conclude if that was the case because some learners neither submitted the activities nor completed them in a short time.

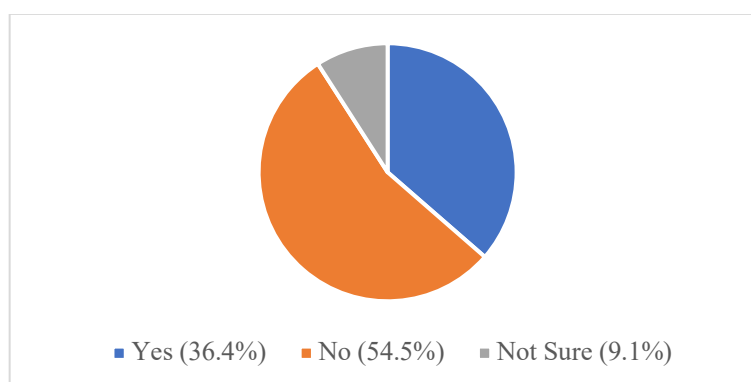


Figure 6. Assistance was requested by the students.

54% of teachers assumed that students could participate in the activities without any help, whereas 36% of teachers thought the students needed help. The students were allowed to use their textbooks while completing the laboratory activities since these were only practice sessions. The content was new for many students who could not simply rely on their memory to complete the activities. Some questions also challenged them, such as spelling activities, and forced them to use their books.

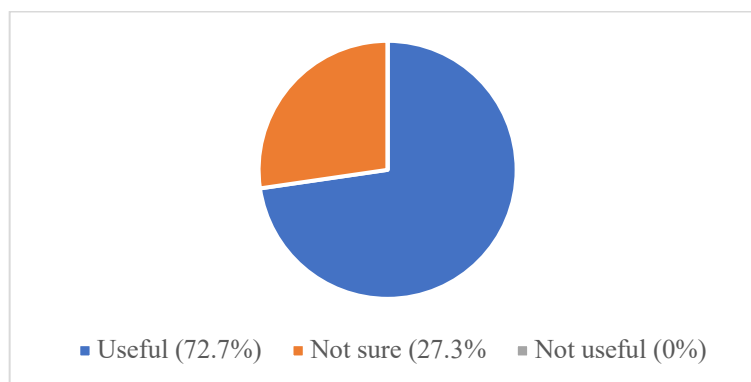


Figure 7. The usefulness of activities.

Eight teachers concluded that the activities were useful for students to practice their lessons, although some teachers failed to decide if the practice activities were useful. The practice activities are valuable because they promote the retrieval of the learning content. The remaining teachers failed to decide if the activities helped the learners. Importantly, none of the teachers were against doing the activities.

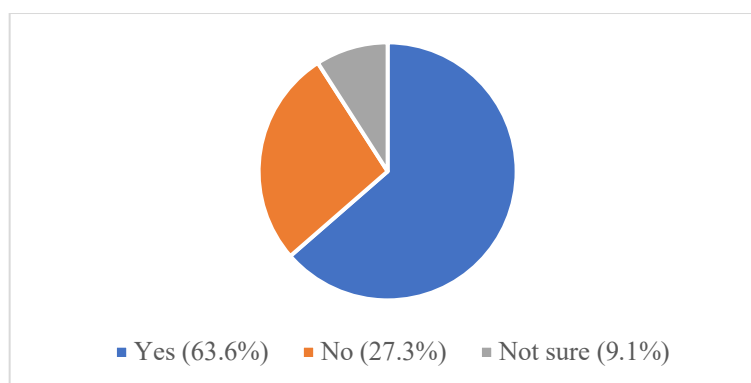


Figure 8. Future use of the activities.

Figure 8 indicates that about 63% of the teachers decided to use these online laboratory practice activities again in the next semesters due to their effectiveness. About 27% of the teachers preferred not to use these activities. A few teachers could not decide about the usage of such activities in the future.

4.1 Results of the Interview

Following Wolcott's (1994) three aspects; description, analysis, and interpretation of the prior results with teachers' commentaries, this section addresses the findings and research questions. Teachers felt that the practice activities were easily accessible to students who did not encounter technical difficulties during the e-

learning classes. Teachers observed the students to ensure that they were engaged in self-learning to complete the required activities because they were given enough time to complete all activities during the e-learning classes.

The first research question focused on teachers' thoughts about the role of e-learning lab activities in language learning. Teachers' responses about students' participation indicated that the activities were useful in engaging students. As seen in all figures, six teachers at least had positive responses and thoughts about students' engagement and motivation. The teachers' responses in the interview session described the students' activities.

- (1) Most of the students were interested in completing the activities.
- (2) Were engaged completely in completing the activities.
- (3) Many self-motivated learners are dedicated to completing the questions.

According to the teachers, most students were busy doing the activities. They enjoyed completing the activities in the e-learning laboratory class. This was clearly stated by several teachers when talking about the course, such as

- (4) Lab practices and various questions, interactive ones made the e-learning class more fun.

This supports the findings of Guo's (2021) study on the correlation between engagement and enjoyment. Enjoying the learning activities shows that students were emotionally engaged (Fredricks et al., 2004; Pekrun & Linnenbrink-Garcia, 2012) and sustainably motivated (Mercer & Dörnyei, 2020).

Moreover, teachers' views about time are similar to the data in Figure 3, such as

- (5) The average was spending more than 30 minutes to complete the activities."
- (6) As an instructor, it is encouraging to see learners working on their own and figuring out the answers for about 30 minutes.

These views indicate the comfort of students while completing these tasks. They would not spend much time completing activities if they did not feel relaxed. It is obvious in the teachers' responses like

- (7) Students were indeed happily involved in the self-learning activities.

Learning environments influence students' motivation, enjoyment, interest, and engagement, as seen in the SDT and TAM. Reeve (2012) and Mercer (2019) mentioned that self-learning is maintained for a long time in positive learning settings.

Spending most of the class time answering the questions demonstrates that the students were busy thinking and analyzing the learning materials. Indeed, such a practice means that students were cognitively engaged (Fredricks et al., 2004) with the required manners in this online learning environment (Furrer & Skinner, 2003) and high thinking skills (Prince, 2004). This supports the findings of previous studies about active learning and self-learning (Noels et al., 2019; Oga-Baldwin et al., 2017) and about using technology to mediate their self-learning and meeting learning goals (Pan & Chen, 2021; Teo, 2015).

These comments show that some students can depend on themselves to complete the tasks and are highly motivated to finish them. This active engagement also indicates that most students did not require the teachers' assistance. According to a

teacher, “they tried to find the answers without the instructor’s help.” Students’ self-learning and positive attitudes toward technology-based learning boosted their motivation, which led to higher self-efficacy (Pan & Chen, 2021). Therefore, self-efficacy enables their self-motivation, self-organizing, self-monitoring, and self-evaluation (Oga-Baldwin et al., 2017; Zimmerman, 1990).

On the other hand, the teachers felt that some students did not complete the activities. It was frequently mentioned by the teachers that some students worked without motivation, and they rushed to finish quickly without concentrating on the learning goals. The reason behind this might be the lack of interest in doing so, which shows that their needs were not met (Ryan & Deci, 2020). Therefore, their emotional engagement was not helpfully employed to achieve the learning objectives (Fredricks et al., 2004). This agrees with the study of Dincer et al. (2019) about the relationship between students’ needs and their engagement and motivation. The participation and success of most students rely on how their psychological demands are satisfied.

Another reason might be the lack of grading for these activities. The teachers supposed that some students did not complete the activities because they did not obtain grades or participation marks for completing the activities. Among the teachers’ comments,

- (8) Since the activities were optional, the motivation was not there, especially when students were not required to submit each activity.
- (9) These activities were only part of the self-learning, so there was no incentive for them to complete all the activities.

This means that marks might challenge students to complete the tasks differently to obtain the reward, as an extrinsic motivation (Jiang & Zhang, 2021). This proves what Pan and Chen (2021) and Romero-Frías et al. (2023) discovered about the factors that manipulate students’ extrinsic motivation.

One likely reason can be attributed to the absence of support by the teachers and the learning environment in general. Self-doing activities might isolate students in online settings and demotivate them in learning due to the lack of relatedness. The findings of Noels et al. (2019) indicate the significance of students’ feelings of relatedness, besides autonomy and competence, in determining their performance in learning environments. Previous studies also prove that teachers can support students’ perceptions of and relationships with learning settings (Mercer & Dörnyei, 2020; Mystkowska-Wiertelak, 2020), have positive interactions with students (Dincer et al., 2019), improve students’ participation and accomplishment (King & Ganotice, 2014; Oga-Baldwin et al., 2017), and facilitate their self-efficacy (Schunk & Mullen, 2012) and self-directed learning (Pan & Chen, 2021).

It is a matter of fact that some responses display a few negative thoughts about the length and boredom of the activities and the students’ seriousness and performance. Some students were not comfortable with the self-learning process or student-centered learning environments. They are dependent learners who require teachers’ guidance and support in every single step, as discussed earlier. Furthermore, several students lack interest in modern online learning technologies. Such students are against the change and unable to accept new technologies in their learning.

- (10) Some of my students do not like to answer questions on the computer. They like to use pens, paper, and physical materials.

Self-learning and self-centered learning are not suitable for all students. Some teachers agreed that such self-learning activities are usually completed by 'good students to complete their learning' and 'responsible learners or serious learners which care about building knowledge and themselves.' Thus, such self-learning activities were difficult for some students who saw them as hard or irrelevant activities. They lost concentration in such a self-centered learning process due to several causes including motivation, technology acceptance, learning environment, technological self-efficacy, perceptions, and needs (Mercer, 2019; Noels et al., 2019; Oga-Baldwin et al., 2017; Pan & Chen, 2021).

The second research question looks at how e-learning laboratory activities support self-learning and active learning. In traditional face-to-face learning, teachers usually use paper-based tasks after a lesson to evaluate students' understanding. These tasks are exhausting and demanding. They require much time to prepare, conduct, mark, and evaluate with beneficial feedback, while most teachers are busy with many duties. On the other hand, online learning activities are different for both teachers and students. They can provide many opportunities to develop teaching approaches, particularly in self-centered learning.

The findings show that online activities supported students to rely on themselves in answering the questions and reviewing their lessons. As explained by the teacher

- (11) These questions were interactive since they involved some models of drag-and-drop questions. It made the learners think, select their choices, and challenge their knowledge."

Such challenges are required in learning settings to engage learners and support their autonomy, as stated by SDT (Ryan & Deci, 2020). The teachers recognized the benefits of these activities due to the variety of questions and tasks they had. This diversity of activities satisfies the individual differences in students who differ in learning preferences and studying strategies. This confirms the findings of Lai et al. (2018) about devoting numerous teaching methods to accommodate students in various forms of technology-related settings. It also meets students' different needs and encourages their self-based learning. A teacher agreed that the variety of learning activities 'reinforces the content knowledge since the learner engages with the content while solving different questions.'

Having various questions, activities, and methods raises students' motivation, as observed in this study. A teacher said,

- (12) They will only do work if they feel it is valuable to them and they want to learn the content alone.

Most students were self-motivated to participate in the activities and reinforce the concepts that were covered in the class. When they feel the value of the tasks, they enjoy working on them to the end (Guo, 2021). Although these activities were not a part of the evaluation, the students felt their connections to the learning content and knowledge construction. This valuable connection contributed to their motivation and engagement to learn. If students appreciate the value of learning tasks, most of them take the tasks seriously (Ryan & Deci, 2020).

This made most of the teachers conclude that students were active participants during the e-learning classes. The students were independent in answering the questions and experiencing the active learning practices. This does not include all students, but as Figure 5 shows, the majority of students were engaged in the learning

process. Engagement includes students' behavior, emotion, cognition, and social components (Mercer & Dörnyei, 2020).

For those few students who were demotivated and not interested in doing these activities, there might be some needs, such as attention and support from their teachers and constructive feedback. Moreover, they might face difficulties in using the technologies or accessing the activities. In online learning, teachers should take care of such students and provide them with their needs. It is the teachers' duty to ensure that students receive constructive feedback at the right time, either by the teacher or by students helping each other (Tian & Zhou, 2020). Some students might look for guidance to log on to online resources and use modern technologies (Lai et al., 2018).

Online learning provides teachers with more time than traditional face-to-face learning. Using technological tools in education allows teachers to assist students in diverse ways and look after their needs. Low-level students require a teacher's support to progress in learning (Mayer, 2009). In language learning, students are not at the same proficiency level (Tian & Zhou, 2020), so teachers should adapt the appropriate materials for students and enrich their awareness of educational purposes so that they can establish their learning objectives and contribute to the course's goals (Nunan, 1997).

Teachers should also consider those students who are not used to technologies and virtual learning practices. Different causes force students to avoid online learning, including personal preferences, previous experiences, vague procedures, technical issues, and internet disconnections (Al Shlowiy, 2022). Modern teaching depends on technologies, especially after COVID-19 that facilitated online learning to grow rapidly, obtained more consumers, and defeated several challenges. Teaching methods can facilitate students' online practices by developing their PU and strengthening their PEU (Pan & Chen, 2021). This also requires teacher support in facing technical issues and building suitable self-directed learning tasks, as resulted in Oga-Baldwin et al. (2017).

Implementing these principles is difficult without having beautiful environments and solid relationships between teachers and students. As found in previous studies, a social environment with effective relationships between teacher and students creates emotional support (Pan & Chen, 2021; Snijders et al., 2020), develops learners' self-directed learning (Dincer et al., 2019), reinforces students' PU and PEU (Lai et al., 2017), improves technological self-efficacy (Pan & Chen, 2021), and stimulates their motivation, enjoyment, interest, and engagement (Ainley, 2012; Mercer, 2019; Reeve, 2012).

Current students are emerging in digital technologies, but some students do not enjoy digital learning. They still appreciate the formal ways of learning and do not recognize that online learning settings are replacing many physical ones. Teachers' role is to utilize modern teaching methods and online instructions to support students' autonomy, motivation, and engagement in learning environments as well as to foster pedagogical materials of learner-centeredness and self-direction that assist learners in formulating their objectives (Nunan, 1997). Meeting students' expectations and needs and fostering their behavioral, emotional, cognitive, and social engagement is challenging (Mystkowska-Wiertelak, 2020) to advance students' participation and academic outcomes (Dincer et al., 2019; Oga-Baldwin et al., 2017).

5. CONCLUSION

This study aimed to assess the effectiveness of online learning activities in promoting student engagement, motivation, autonomy, and active learning. The findings showed that students were generally engaged with the activities, even if not all tasks were completed. Teachers' feedback suggested that online exercises captured students' interest and allowed them to review lessons independently. Additionally, challenging tasks were found to enhance student autonomy by encouraging self-reliance, critical thinking, and the use of various instructional strategies in technology-based learning environments.

The research highlights the need for educators to integrate technology into their teaching while addressing potential challenges. Teachers play a crucial role in promoting students' self-directed use of technology and fostering a sense of connection and enjoyment in learning. They should provide practical opportunities for students to engage in independent learning and cognitive processes that expand their knowledge. Varying teaching methods and supporting diverse learning styles are essential to accommodate differences in student motivation, engagement, and autonomy.

Despite its valuable insights, the study had limitations, such as a small sample size and the exclusion of students from direct participation. Future research should involve larger, more diverse teacher samples and include student perspectives, particularly from low-achieving or unmotivated learners. Incorporating different methodologies and focusing on both teacher and student experiences will offer a more comprehensive understanding of the effectiveness of online learning activities.

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APPENDIX

Survey Questions

- (1) How did you find the laboratory practice activities? Your first impressions, please.
- (2) What do you think about the role of e-learning laboratory activities in language learning?
- (3) Did you upload the laboratory practice activities on the e-learning Blackboard courses for students?
- (4) How long did the students take to complete one laboratory practice activity during their laboratory hours?
- (5) Did the students face any internet issues while doing the laboratory practice activity?
- (6) How can these activities support self-learning and active learning?

- (7) The laboratory practice activities were
 - a. Difficult b. Easy c. Not Sure
- (8) Did the students actively participate in the laboratory practice activities?
 - a. Yes b. No c. Not sure
- (9) How do you think the students benefitted from these laboratory practice activities?
- (10) How did the students perform the laboratory practice activities?
- (11) The laboratory practice activities were
 - a. Useful b. Not Useful c. Not Sure
- (12) Did the students use their books while doing the laboratory practice activities?
 - a. Yes b. No c. Not sure
- (13) How do you think these activities can be improved?
- (14) Would you recommend the laboratory practice activity for the next quarter/semester?
 - a. Yes b. No c. Not sure
- (15) What are your suggestions and recommendations?