E-LEARNING ECOLOGY AND ITS IMPACT ON FIRST-YEAR VIETNAMESE EFL STUDENTS' SELF-REGULATED LEARNING AND MOTIVATION IN A TRANSITION TO ONLINE PLATFORMS

Nguyen Thuy Nga*

VNU University of Education,
No. 144 Xuan Thuy, Cau Giay, Hanoi, Vietnam

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Abstract: The transition from high school to university academic life is challenging for many first-year students as they have to adapt to new learning styles and a self-regulated environment that is different from what they were familiar with during school. Learning becomes complicated when the traditional class setting switches to e-learning, requiring tremendous effort. Students have to adjust their learning habits, learn to collaborate and maintain interaction with others. This study investigates first-year EFL students' experience during the transition from face-to-face to e-learning, targeting the influence of factors such as interaction with lecturers and peers, assessment, and peer support on students' motivation and self-regulated learning. Three hundred fifty-two students participated in the survey, and 36 joined the interview. The lecturer interaction and peer support were crucial to motivate students; peer interaction helped navigate self-regulated learning, and assessment regulated students' learning approach. Challenges of e-learning were notified, and recommendations were proposed to enhance learning quality.

Keywords: learning ecology, e-learning, motivation, self-regulated learning, transition, interaction

1. Introduction

Integrating digital platforms into language teaching and learning is essential in the globalization process and the advancement of technology. The outbreak of Covid-19 waves has sped up the transition from a rigid traditional face-to-face to a flexible blended learning or e-learning (also referred to as online) mode. According to the report *Policy Brief: Education during Covid 19 and Beyond*, released by the United Nations in August 2020, the "crisis and the unparalleled education disruption are far from over" (United Nations, 2020, p. 1); however, the crisis has vitalized innovation with the distinctive soaring of e-learning. While some are concerned that the swift switch to e-learning can later lead to consequences and whether e-learning will persist post-pandemic, others decide to make this learning mode an integral part of their 'new normal' education setting to strengthen education resilience and deliver quality education.

Previous studies suggest that e-learning impacts EFL language learners' motivation and outcomes (David & Grosu-Radulescu, 2016; Fandino et al., 2019) because language learning requires time and effort. Hence, learners must be physically, mentally, and emotionally immersed in

* Corresponding author.
Email address: thuynga@vnu.edu.vn

learning to acquire the language successfully. For first-year EFL students, transitioning from regular face-to-face learning to e-learning/online learning is challenging if they cannot foster a sense of self-regulated learning and actively engage in a new learning environment. The bewilderment when moving from high school to university learning culture and the lack of physical interaction with lecturers and peers in an e-learning environment can lead to demotivation and negative experiences.

E-learning environment is considered an umbrella term for learning factors and processes taken on the internet (Moore et al., 2011). It can include interaction with lecturers and peers, support, assessment, and self-regulation. Each factor in the learning ecology can mitigate or aggravate students' pressure. However, there needs to be more studies on the influence of e-learning factors on first-year EFL students. This study, therefore, aims to investigate the interrelation among e-learning factors and their impacts on first-year EFL students' self-regulated learning and motivation at a university in Vietnam.

Research questions:

1. How did students experience e-learning in terms of interaction with lecturers and peers, institution support, skill enhancement, assessment, self-regulated learning, and motivation?

2. How did e-learning factors (interaction with lecturers and peers, peer support, and assessment) influence students' motivation and self-regulated learning?

2. Literature Review

Previous studies on e-learning have shown that e-learning factors influence EFL students' motivation; students' extrinsic and intrinsic motivation decreased in online learning (Meşe & Sevilen, 2021). However, e-learning offers efficient assistance for self-regulated learning (Zhao & Chen, 2016). There is a link between the learning environment and students' motivation and satisfaction with the course (Park & Choi, 2009; Li et al., 2016). Interaction, instructor presence, technology, and self-regulation can affect students' decision to continue or drop out of the course (Kauffman, 2015).

2.1. Interaction

Interaction is the main factor that motivates students' learning and satisfaction with the course (Moore, 1989; Anderson, 2003). According to Rhode (2009), the interactivity of e-learning or online courses can occur in two forms, i.e., formal and informal interaction. The formal includes the interaction of students and their lecturers, peers, and learning content, whereas the informal extends the standard components to the student network and student collective. Student network refers to the ability to connect and collaborate to develop a learning ecology niche, while student collective implies the ability to access other supplementary informal resources. The insufficiency of either formal or informal interaction environment leads to learning deficiency and dissatisfaction (Kurucay & Inan, 2017).

In an e-learning environment, the student-lecturer connection can occur by receiving feedback, comments on students' performance, teaching methods, and discussion of learning content to increase active participation (Sher, 2009; Al-Khresheh, 2021). Student–content interaction is the process of students' interaction with the e- materials of the course (Kumar et al., 2021). Student-student interaction occurs through collaborative tasks, giving and taking contributions of group members. Student-student interaction positively influences language learning by providing chances to communicate in the target language and collaboration among them (Hien, 2019). As a result, the education

transaction of student-lecturer and student-student has engaged students in activities and provided support and motivation (Gikandi, 2021; Meşe & Sevilen, 2021).

2.2. Assessment

Previous studies have confirmed the strong linkage between assessment, self-regulated learning, and motivation in EFL (Birijandi & Tamjid, 2010). Assessment involves reflecting on the quality of the learning process by collecting feedback on their performance and outcomes. There are two forms of feedback: external and internal (Yan & Brown, 2017). External feedback comes from interaction with lecturers, peers, and learning content, whereas internal feedback refers to self-generated 'implicit information' via their internal states (Yan, 2019). Topping (2003) and Panadero et al. (2018) further report that self-assessment positively influences self-regulated learning. The shift to e-learning requires adapting assessment techniques. Self-assessment and peer assessment can be used for personalized feedback (Kearns, 2012). However, the lack of I.T. skills, internet availability, and online assessment reliability can cause challenges for students (Beleulmi, 2022).

2.3. Self-Regulated Learning

Self-regulated learning is defined as the process in which students direct their learning. They set goals and monitor, regulate, and modulate their cognition, motivation, and behaviors within an educational setting (Zimmerman, 2000; Pintrich, 2004). The link between motivation and self-regulated learning has been the focus of many studies. Strategies such as self-assessment, planning, archive records, peer and lecturer assistance seeking, and note reviewing are successful learning tools related to motivation and performance (Sahin Kizil & Savran, 2016).

Using technology to enhance self-regulated learning has made further steps in foreign language teaching and learning with various online tools. The advance of technology has enhanced formal and informal learning environments beyond the physical classroom context (Lai et al., 2013). Students can discuss with class members via forums or meeting rooms and fulfil tasks online. Language learning can take place anytime, anywhere, as long as it suits students' schedules and plans.

2.4. Motivation

Factors affecting second language motivation were classified into two groups: internal and external. Internal factors emerging within the individual include knowledge, accomplishment, and stimulation (Ng & Ng, 2012), such as interest, confidence, and curiosity. External factors, on the other hand, come from outside the individual, e.g., feedback, rewards, and networks. In some studies, motivation predicts self-regulated learning (Mahmoodi et al., 2014) and controls the regulation process (Schunk, 2005).

2.5. Learning Ecology

Learning ecology emerged from 'ecology' or 'ecosystem' in biology, which implies the connection and interaction between the individual and the surrounding environment. According to Barron (2006), learning ecology is the collection of formal and informal 'contexts' in physical and virtual environments to provide learning opportunities through technological mediation. With the merger of technology into the learning environment, the 'digital ecology' (Girard & Stark, 2007) provides learners with new interactive experiences and collaboration. Similarly, Normak et al. (2012) propose an ecological approach to enable self-regulated learning possibilities. In this model, learners receive feedback from the learning community to develop their learning pathways between niches. Li et al. (2020) leverage that the English

teaching ecosystem comprises ecological factors such as teachers, peers, ICT, teaching resources, and ecological environment as policies, teaching facilities, and campus culture. Under the influence of ecological factors in the learning environment, students configure their learning strategies and develop their ecological niches towards English learning goals (Li et al., 2020). The interaction and relationships among factors in learning ecology and their impact on students' self-regulated learning and motivation during the transition from face-to-face to online learning require further research.

Based on the previous studies on learning ecology, e-learning, motivation, interaction, and self-regulated learning, this study proposes a research model which includes two main groups of formal and informal settings (Barron, 2006) in e-learning ecology. The formal setting involves institutional support, lecturer interaction, and assessment factors. The institution support facilitates and assures the quality of the online courses via policies, feedback, technical support, information updating, and an e-learning platform. Lecturers provide learning content, carry out teaching processes, and give support and feedback to students. Lecturer interaction can also occur in small talk and outside class communication. E-learning assessment covers online tests, quizzes, and assignments from lecturers, and students can check results and self-assess their work. The informal setting covers peer interaction, self-regulated learning, motivation, and skill enhancement. The interaction with peers has various forms, such as support, feedback, or group work discussion. Although self-regulated learning and motivation act as two independent factors, they also receive impact from other factors of e-learning ecology. These formal and informal settings play their role in e-learning ecology, providing tools, support, and a platform for the student's learning process.

3. Methodology

3.1. Context and Participants

The research took place in a foreign language teaching university in Vietnam, and 352 first-year non-English major students participated. It is required that students have to achieve B1 (CEFR) or equivalent when they graduate. Since the university is a member of the National University, the course is provided for students from different majors of other member universities; as a result, lecturers use different online platforms provided for the courses, such as Moodle, Zoom, Google Meet, and Microsoft Teams.

This research was carried out after students had experienced e-learning for at least three months to have sufficient experience with the new learning mode.

3.2. Data Collection and Analysis

3.2.1. Quantitative Data

Google form was used for data collection, and the survey link and QR code were sent to students via their emails registered for the English course.

A questionnaire was the main data collection method. The questionnaire items were written in Vietnamese so that all students understood. The questionnaire was adapted from Nguyen and Tran (2022). Statistical Product and Services Solutions (SPSS) version 22 was used for data analysis. Likert Scale with 4 points was used in the questionnaire to avoid confusion and reduce the chance of neutral choice because it is documented that 'more scale points seem to reduce skewness' (Leung, 2011), and the

use of 4 points was considered an optimum (Borgers et al., 2004).

The questionnaire was piloted with 46 students to check the reliability of the scale items. Two items with Cronbach's Alpha under the threshold of 0.5 were removed, and three items were reworded after the pilot test. Students participating in the pilot were asked to refrain from participating in the official survey.

The questionnaire was divided into two main parts. The first part asked about general information such as gender, specialized subjects, and tools used for e-learning; the second part inquired about time spent on online tasks and the frequency of doing online activities. This part also explored students' motivation, interaction with lecturers and peers, self-regulated learning, assessment, technical support from schools, and skills acquired during the e-learning. In this research, e-learning and online learning are used interchangeably with no difference.

3.2.2. Qualitative Data

Participants who took part in the survey were invited to the in-depth discussion, and 36 students agreed to join the interview. A sequential explanatory design was used for this study. The results of quantitative data gave the basis for a qualitative approach to discuss in more detail with students. Semi-structured interviews with guided questions were used for the interview targeting the influence of lecturer and peer interaction, peer support, and assessment on self-regulated learning and motivation. Students were asked to share their opinions and experience in e-learning. Participants could choose to use either chat box, Google Form, or Zoom for the interview. All questions and answers were in Vietnamese, and the data was later transcribed and coded for analysis.

4. Findings

4.1. Students' Experience in the E-Learning Environment

Table 1

Demographic Results and General Information

	Frequency (n =352)	**Percent (%)**
Gender		
Female	242	68.8
Male	110	31.3
Majors		
Economics	44	12.5
Computer Science	62	17.6
Science	48	13.6
Social Sciences	70	19.9
Foreign Languages	128	36.4
Tools used		
Laptop	231	65.6
Smartphone	93	26.4
Desktop	24	6.8
Tablets	4	1.2

Table 1 demonstrates the critical characteristics of the survey results. Among 352 first-year-students taking part in the survey, female students were dominant with 68.8%, and male students covered 31.3. Students came from different majors such as Economics (12.5%), Science (13.6%), Computer Science (17.6%), and Foreign Languages (36.4%), i.e., Korean, Japanese, Chinese, and French. Laptops were mainly used for online learning with 65.6%, followed by smartphones (26.4%) and desktops (6.6%), and tablets were not favoured with only 1.2%.

Table 2

Time Spent on Materials Provided in E-Learning Courses for Each Lesson

	Never	5-10 minutes	10-30 minutes	30-60 minutes	> 60 minutes	Total
Video/clip	10.2	23.0	35.5	19.6	11.6	100%
Ppt/pdf/doc	1.1	6.8	28.1	39.2	24.7	100%
Other materials	9.7	18.5	33.0	24.1	14.8	100%

As can be seen from Table 2, with the materials provided in the e-learning course, only some students resisted working on materials. They spent at least five to 60 minutes watching videos and reading documents. Many students took around 10 to 30 minutes of reading materials per lesson. Non-English major students may need more time to watch and read repeatedly to fully comprehend the content, which explains why some students spend more than 60 minutes on given materials.

Table 3

Students' Experience With Lecturer-Student Interaction in E-Learning

No	Interaction with lecturers	Mean	Std. Deviation
1	Lecturers provided sufficient learning materials and information for courses on an online platform.	3.41	.643
2	I received the lecturer's feedback during my learning course.	3.34	.682
3	Receiving lecturers' assessment feedback on my work helped me progress in learning.	3.21	.768
4	I contacted lecturers outside a class hour for support when I had learning difficulties.	2.64	.935
5	I gave feedback on the teaching method and content of the lecturer.	3.04	.856
6	Lecturers worked with us to clarify and develop assessment criteria for e-learning tasks.	3.27	.714

*N= 352. Minimum 1, Maximum 4

The study findings showed that the interaction with lecturers during the e-learning occurred from both sides. Lecturers provided materials and feedback throughout the course (mean 3.34), and students initiated their connection by giving feedback on content and teaching method (mean 3.04). Students reported that lecturers' feedback helped their learning progress (mean 3.21). In addition, technical support from lecturers to set up and clarify assessment criteria for online tasks was well-perceived by students (mean 3.27). The general agreement with lecturer interaction items indicated that lecturers played an essential role in students' progress. However, it was apparent that students were reluctant to contact lecturers outside class hours (mean 2.26), as presented in Table 3.

Table 4

Interactions With Peers in E-Learning

No	Interaction with peers	Mean	Std. Deviation
	Peer support		
1	I gave feedback on my peers' work in the online forum.	2.82	.898
2	I actively asked for my peers' help when I struggled with my learning tasks.	3.12	.795
3	I received peer support in e-learning activities.	3.15	.774
4	I collaborated with peers when we had group work.	3.45	.694
	Peer interaction		
5	I actively contributed ideas to clarify the task issues.	2.88	.744
6	I suggested solutions for group work tasks.	3.02	.722
7	I adjusted my solution according to my classmates' suggestions.	2.95	.764

*N= 352. Minimum 1, Maximum 4

Regarding interaction and collaboration with peers, the results of Table 4 signified that students actively sought and offered assistance for friends when having difficulties (mean 3.12 and 3.15). They also suggested solutions for group work (mean 3.02) and collaborated with peers to fulfil tasks (mean 3.45). Nevertheless, it was noted that giving feedback to peers in online forums was not high (mean 2.82). The result matched with the participation frequency shown in Table 2 that students barely joined in class discussion forums and feedback activities.

Among the group of peer interaction, suggesting solutions in group work tasks ranked the highest (mean 3.02), followed by adjusting solutions after receiving feedback (mean 2.95) and actively offering ideas to clarify the issues (mean 2.88).

From the results, students are more enthusiastic in assistance situations and less interested in contributing to class and group tasks which may later influence students' motivation in e-learning and self-regulation.

Table 5

Assessment of the E-Learning Platform

No	Assessment in an online platform	Mean	Std. Deviation
1	Self-assessment helped me achieve my learning goal.	2.99	.745
2	Peer assessment helped me learn effectively.	2.69	.816
3	I could check the learning results immediately.	3.24	.743
4	The results of the assessment correctly reflected my ability.	2.82	.965

*N= 352. Minimum 1, Maximum 4

Another e-learning ecological factor is assessment which is usually one of the main concerns for students, especially when they switch to new assessment tools (Table 5). Students reported that they could check results immediately (mean 3.24) and self-

assess their work to achieve their learning objectives (2.99), although some needed clarification on whether the online assessment correctly reflected their competence (mean 2.82). In addition, peer assessment was not considered an influential factor for their learning (mean 2.69). Students possibly felt that they could check the results online and assess their learning; consequently, the evaluation from peers was not preferred.

Table 6

Self-Regulated Learning in the E-Learning Environment

No	Self-regulated learning	Mean	Std. Deviation
1	I planned my learning schedule.	3.09	.769
2	I actively adjusted my learning pace (preparing lessons before class, submitting early, finishing tasks early).	3.19	.732
3	The deadlines were suitable for me to finish tasks.	3.17	.847
4	I archived tests, evaluation sheets, and lecture notes for consolidation.	3.13	.795
5	Besides provided materials, I actively searched for other resources to achieve my learning goals better.	3.03	.787
6	When learning on the online platform, I upheld my focus.	3.08	.729

*N= 352. Minimum 1, Maximum 4

Since students are required to get B1 (CEFR) or other equivalent tests such as TOEFL and IELTS to graduate, they are well – aware that proactiveness and regulation in their learning are vital, which explains the high ranks of the self-regulated learning construct. The results in Table 6 indicated that students planned and organized their study throughout the learning process, from designing the learning schedule (mean 3.09), regulating the learning pace (mean 3.19), searching for supplementary resources (mean 3.03), keeping materials for consolidation (mean 3.13) to focusing on learning (mean 3.08). Among these activities, adjusting the learning pace (e.g., preparing for lessons, finishing tasks early, etc.) ranked the highest (mean 3.19), and the second highest ranking was the reasonable deadline for the online tasks (mean 3.17).

Table 7

Institution Support and Skill Enhancement

No	Institution support	Mean	Std. Deviation
1	I attended training courses on using online platforms.	2.39	.883
2	I received technical support from the university during my e-learning.	2.73	.895
3	The university updated me with e-learning information.	3.17	.784
4	I am offered to give feedback on the effectiveness of learning on the online platform.	3.23	.807

	Skill enhancement		
5	I learned more I.T. skills.	3.30	.777
6	I learned more soft skills (group work, presentation, conflict solution).	3.14	.847
7	I could apply knowledge learned to solve problems.	2.91	.785

*N= 352. Minimum 1, Maximum 4

Besides the interaction with lecturers and peers, students interacted with their universities through technical channels regarding updated information, surveys on the effectiveness of e-learning, technical support, and training courses. However, the results show that only some students attended training courses or sought technical support from their universities (mean 2.73 and 2.39).

One of the advantages of e-learning was the development of I.T. skills and soft skills enhancement. Students confirmed that they acquired more I.T. skills (mean 3.30) and learned to collaborate, solve conflict, present ideas (3.14), and apply what they learned to solve real-life problems (mean 2.91). Table 7 wrapped up the results from students' opinions on institutional support and skill enhancement.

Table 8

Motivation in E-Learning

No	Motivation	Mean	St. Deviation
1	I am interested in e-learning.	2.57	.778
2	There were useful activities on the online platform.	2.81	.796
3	I had chances to demonstrate my ability with e-learning.	2.24	.854
4	I get higher marks when using the online platform for learning.	2.33	.914
5	I could interact with classmates frequently during e-learning time.	2.68	.987

*N= 352. Minimum 1, Maximum 4

Regarding motivation in e-learning, this section receives the lowest points compared to other factors (Table 8). The finding reflects students' bewilderment after switching to complete e-learning. The internal factors (possibility of demonstrating ability and interest) or the external factors (practical online activities, frequent interaction with peers, and getting higher marks) could not motivate students. Although many students rated that there were practical online activities (mean 2.81) and they could frequently interact with peers (mean 2.68), they disagreed that they had chances to demonstrate the ability (mean 2.24) and could get higher marks in online platforms (mean 2.33). Students also pointed out in interviews that their motivation was low during e-learning time.

4.2. Students' Opinions on the Impact of E-Learning Factors on Students' Self-Regulated Learning and Motivation

Thirty-six students were invited to join the discussion to provide more insights into the impact of e-learning factors on students' motivation and self-regulated learning. Students were asked to share their experiences about the interaction with lecturers, peers, and assessment and how these factors impact their self-regulated learning and motivation.

4.2.1. Impact of Lecturer Interaction

Lecturers in e-learning classes were reported to affect students positively or negatively depending on how they interact and acknowledge students' effort - regarding the lecturer's factor, interaction and communication emerged as main sub-themes for motivation. Many students emphasized in the interview that they needed more interaction and small talk with lecturers to motivate them.

Participant 11: *'I was new in this learning environment; interaction with the lecturer was important and affected my motivation.'*

Participant 8: *'Seeing lecturers physically and direct conversation led to some small talks and made closer relationships. As a result, I would feel more comfortable and love English more.'*

Participants 3 and 18, who experienced being ignored in online class interaction, said they were disappointed and lost motivation due to the incident.

Participant 3: *'I frequently interacted with lecturers during class hours; however, they did not acknowledge my contribution and compliment other students, which disappointed me and made me unmotivated to learn.'*

Participant 18: *'The decreased interaction with lecturers discouraged me from learning. The lecturer asked a question and only the called-on student answered; hence, my learning could have been more efficient than on-site learning.'*

Few students reported that their intrinsic motivation was not affected; for instance, participant 23 said that his motivation for English learning came from his own needs. Participant 9 noted no difference between online and face-to-face interaction, which did not affect motivation.

Regarding self-regulated learning, students had mixed reactions. They acknowledged that lecturers gave advice and suggestions on learning and finding resources, and the interaction with lecturers made them more studious. Interestingly, while some believed they needed guidance from lecturers to shape their learning and develop skills, most of the interviewed students confirmed that they managed their learning. As a result, the interaction was not an influential factor.

Participant 20: *'The advice of lecturers was the direction for me to adjust my learning. For example, in debate learning, I was suggested to find information about fallacies, and I was more certain about what I should prepare for a successful debate.'*

Participant 24: *'Lecturers helped me visualize my plan to learn four skills better. For example, I learned one skill in each lesson and practiced what I learned after class. My English learning became effective because I used to learn what I liked*.'

Participant 13: *'No, the interaction, support, and teaching of lecturers did not influence how I organize and manage my learning.'*

Participant 9: *'I spent time self-learning and was autonomous in learning.'*

4.2.2. Impact of Peer Support and Peer Interaction

Peer support is one of the crucial factors in an e-learning environment that impact students' motivation and self-regulated learning. A common opinion among students was that peer support helped them focus and understand the tasks, although sometimes they needed to be more open to asking.

Participant 25: *'I asked for peer support, and it worked well for my study.'*

Participant 5: *'We often discussed or organized Zoom meetings to practice. Their support was useful for my learning. I could understand the lesson and organize my learning.'*

Some students expressed that they felt motivated and less isolated due to friends' assistance:

Participant 26: *'I usually asked for peer support which helped me to understand the projects and deadlines. So, I am excited to learn online thanks to their support.'*

Participant 1: *'I frequently sought peer support, and this helped me less lonely in my learning.'*

Participant 4: *'I did ask for peer support, even more than lecturers. Their opinions are useful. I believed I was motivated because of them.'*

It was reported that peer interaction with friends helped increase competition and effort. Students pointed out that their learning style and habit was somehow influenced by such interaction:

Participant 14: *'If someone were brilliant, it would pressure us to learn more. So, besides personal development, my motivation was to compete with them.'*

Participant 5: *'When I saw that my friends could answer the lecturer's questions, I had to try hard to be as good as them.'*

Participant 6: *'The interaction with peers greatly influenced how I learn. My motivation was somehow affected as well.'*

4.2.3. Impact of Online Assessment

The interview results revealed that the new assessment format affected students' self-regulated learning and motivation. Students reported being anxious and worried that technical difficulties or poor network connection might happen during the evaluation, which would badly affect their results. Consequently, they had to adjust their learning to get familiar with different assessment formats.

Participant 30: *'Online assessment had a dramatic impact on my learning organization and regulation because I had to do more online tests and exercises for reading and writing.'*

Participant 31: *'I had to get familiar with reading tasks on the laptop, which is quite inconvenient.'*

Despite the challenges of online assessment and evaluation, students listed advantages of the new assessment style, such as efficiency, less pressure, and fun. Doing exercises online was faster than on paper, and students could enhance their I.T. skills.

Participant 35: *'Doing assessment online reduced my handwriting time. I just needed to type, which saved time and developed my I.T. skills.'*

Participant 34: *'Quite exciting because it is more convenient than a paper test. I felt less stressed than doing the test in class.'*

4.2.4. Impact of E-Learning Setting on Motivation

Regarding self-regulated learning in an e-learning environment, two opposite stances were noticed. While some tried to adapt to the new learning culture and became more focused, autonomous, and creative, others got lazier and less active in learning.

Participant 14: *'After this online course, I developed my self-learning skills and became more autonomous.'*

Participant 25: *'I used to practice by writing out main ideas on paper. Now I create flashcards and consolidate my lesson online.'*

Participant 28: *'I became lazy, and my learning habit got worse and worse.'*

Regarding motivation in e-learning, most students confirmed that their motivation was severely affected, which matched the questionnaire results. Distractive surroundings and long hours in front of screens were mentioned as a cause for students' demotivation. Students reported that they were distracted, exhausted, or sleepy.

Participant 30: *'I was exhausted after days working on my laptop. My motivation decreased.'*

Participant 11: *'Really bad. I felt my motivation decreased greatly compared with face-to-face learning, and my marks also decreased. It seemed that online learning required autonomy. However, my self-learning at home is not good enough due to the interference of other chores, which decreased my focus.'*

Participant *28: 'I became lazier, got up late, and slept in online learning more. I thought I would enjoy my university life and be guided on how to learn, but now I had to do everything myself and spent all my time with my closest mentor 'my old laptop'.'*

5. Discussion

This study investigated the impact of e-learning factors on students' self-regulated learning and motivation. Two research questions were raised to discover how first-year EFL students experienced their e-learning and how the e-learning factors such as interaction, assessment, and support from lecturers and peers affected their self-regulated learning and motivation.

The qualitative and quantitative results indicated that interaction with lecturers is essential to motivate students in e-learning. As Hull and Saxon (2009) and Aromaih (2021) pointed out, even though more interaction does not necessarily mean better outcomes, a deeper level of interaction can optimize students' engagement and participation. This study's students reported high motivation due to receiving feedback and interaction with lecturers. For first-year students, who are in the adaptation process of the transition phase, the interaction with lecturers through formal or informal contexts is a good start for learning preparation and readiness. In addition, sufficient or insufficient lecturers' feedback during the e-learning course or on assessment tasks affected learning motivation. The finding of this study supports studies by Heidari et al. (2017) and Meşe and Sevilen (2021) that lecturer interaction has the potential to be a decisive factor in students' motivation and willingness to communicate. Lecturers, therefore, should be more proactive, involve more students in class activities and design more opportunities for interaction and communication between lecturer–student.

Another result of this research is that although lecturer interaction influences students' motivation, it does not notably affect how students regulate their learning. Students take advantage of peer interaction, seek support and organize their learning accordingly. Peer support and interaction are essential to foster adequate adaptation and help reflect on their learning. In e-learning, not all students know how to adjust their learning with minimum guidance; therefore, the companions of classmates work as a productive channel. However, it is noted that motivating students to participate actively and contribute to online discussions and forums takes effort and time. This finding resembles the study of Fernandez-Rio et al. (2017), who reported that positive interaction and collaborative groups reduce school failure, increase students' motivation, and promote self-regulated learning.

Assessment plays a crucial part in motivating and shaping students' learning both in online and face-to-face contexts by providing insight into learning progress and feasible goals for achievement. This study finding shows that to be qualified by assessment, and students must find a practical learning approach to adapt to the new learning environment. This study supports Kearns's (2012) study that online assessment has many advantages besides technical difficulties, such as convenience, effectiveness, time-saving, and I.T. skill enhancement. In addition, e-learning assessment can be operated easily before,

during, and after each lesson to increase students' participation and engagement, improve learning outcomes, and promote personalized learning.

6. Conclusion

E-learning has proven its advantages in distance learning and disrupting standard settings during the learning crisis to ensure the coverage and continuity of education. Through communication tools incorporated into the e-learning environment, lecturers and students have developed a virtual community to support learning. Accordingly, the effective and efficient use of technology is critical to learning. The finding is in line with the study of Sher (2009) that students appreciate opportunities to have meaningful and positive communication with lecturers and peers to facilitate learning.

The findings of this study show that e-learning ecological factors impact students' motivation and self-regulated learning, and the most critical factor is interaction. Interaction is considered a fundamental indicator of learning success (Moore, 1989), and students appreciate the support, guidance, and interaction of lecturers and peers during their e-learning. The lack of interaction, therefore, has led to demotivation among first-year students.

The interview results of this study also alert the unfavorable factors such as distraction of surroundings, lack of lecturers' monitoring, and the decrease of autonomy, which lead to students' demotivation and ineffective learning style. Despite the advantages of e-learning, students prefer traditional education in the long run, where they can socialize face-to-face with peers and lecturers and focus on learning in physical education classrooms.

Undoubtedly, e-learning is a promising learning option to integrate into current 'new normal' education settings. Hence, universities, lecturers, and students should be well-prepared for a change and make sure everything runs smoothly in e-learning. Accordingly, disadvantages such as demotivation, technical difficulties, and lack of interaction and monitoring should be carefully considered in updated versions of e-learning. Also, various formative assessments in e-learning should be designed to promote individualized learning so students can regulate and monitor their learning.

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HỆ SINH THÁI E-LEARNING VÀ TÁC ĐỘNG TỚI HỌC TẬP TỰ ĐIỀU CHỈNH VÀ ĐỘNG LỰC HỌC CỦA SINH VIÊN NĂM THỨ NHẤT VIỆT NAM HỌC CHƯƠNG TRÌNH TIẾNG ANH NHƯ MỘT NGOẠI NGỮ (EFL) TRONG GIAI ĐOẠN CHUYỂN ĐỔI SANG CÁC NỀN TẢNG HỌC TRỰC TUYẾN

Nguyễn Thúy Nga

Trường Đại học Giáo dục, Đại học Quốc gia Hà Nội
144 Xuân Thủy, Cầu Giấy, Hà Nội, Việt Nam

Tóm tắt: Quá trình chuyển từ trường trung học sang đại học là một thách thức đối với nhiều sinh viên năm thứ nhất vì họ phải thích nghi với phong cách học tập mới và môi trường tự điều chỉnh khác với những gì họ đã quen thuộc trong thời gian đi học trước đó. Việc học càng trở nên phức tạp hơn khi phải chuyển từ môi trường học tập truyền thống quen thuộc sang học trực tuyến, điều này đòi hỏi nỗ lực rất lớn. Sinh viên phải điều chỉnh thói quen học tập của mình, học cách hợp tác và duy trì sự tương tác với những người khác. Nghiên cứu này tìm hiểu những trải nghiệm của sinh viên năm thứ nhất học chương trình Tiếng Anh như một ngoại ngữ (EFL) trong quá trình chuyển từ học trực tiếp sang học trực tuyến và tập trung tìm hiểu tác động của các yếu tố như tương tác với giảng viên và bạn bè, đánh giá và hỗ trợ đồng đẳng tới động lực và khả năng tự điều chỉnh học tập. 352 sinh viên đã tham gia khảo sát và 36 sinh viên tham gia phỏng vấn. Kết quả cho thấy sự tương tác của giảng viên và hỗ trợ đồng đẳng là rất quan trọng để tạo động lực cho sinh viên. Tương tác đồng đẳng giúp định hướng việc học tập tự điều chỉnh và đánh giá giúp sinh viên điều chỉnh cách thức tiếp cận học tập của bản thân. Nghiên cứu cũng đã chỉ ra những thách thức của việc học trực tuyến và đưa ra các khuyến nghị để thúc đẩy chất lượng học tập.

Từ khóa: hệ sinh thái học tập, e-learning, động lực, học tập tự điều chỉnh, chuyển đổi, tương tác