

## The Efficiency of Online Assignments as an Asynchronous e-Learning Tool

فاعلية الواجبات عبر الإنترنت كأداة تعليم إلكتروني غير متزامن

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### **Abstract**

The online learning experience that accompanied the Covid-19 pandemic has been diverse. Both teachers and students have had to discover new online learning methods and tools in order to cope with the new phase. Some teachers relied on virtual meetings and synchronous instruction, whereas others either solely relied on asynchronous instruction through e-assignments or combined the latter to other methods like synchronous e-meetings. While the integration of synchronous tools in distance instruction seems to be more relevant, asynchronous assignments may have an important potential in e-learning given that not all students can access the course at the same time. Indeed, one of the advantages of asynchronous e-assignments is learning anytime, anywhere. For this, the in-hand paper seeks to focus on online assignments and their efficiency to university EFL students. Our purpose is to discover how students view these assignments, and whether they are efficient in learning according to them. We also wish to investigate whether students prefer synchronous online meetings or asynchronous learning tools like e-assignments. In this regard, the sample is made up of fifth-year EFL students at ENSB. By and large, the main findings of this study demonstrate that the majority of EFL students consider asynchronous e-assignments as an efficient e-learning tool.

**Keywords:** Asynchronous learning- efficiency-e-learning tools- online assignment- synchronous instruction

## الملخص

كانت تجربة التعلم عن بعد التي صاحبت جائحة Covid-19 متنوعة حيث كان على كل من الأساتذة والطلاب اكتشاف طرق وأدوات جديدة للتعلم عبر الإنترنت من أجل التعامل مع المرحلة الجديدة. اعتمد بعض الأساتذة على الاجتماعات الافتراضية والتعليم المتزامن، بينما اعتمد آخرون إما على التعليم غير المتزامن من خلال الواجبات الإلكترونية أو دمجوا الأخيرة مع طرق أخرى مثل اللقاءات الإلكترونية المتزامنة. بينما يبدو أن تكامل الأدوات المتزامنة في التعليم عن بعد أكثر فاعلية، فإن الواجبات غير المتزامنة قد يكون لها إمكانات مهمة في التعلم الإلكتروني نظرًا لأنه لا يمكن لجميع الطلاب الوصول إلى الدرس في نفس الوقت. في الواقع، تتمثل إحدى مزايا الواجبات الإلكترونية غير المتزامنة في التعلم في أي وقت وفي أي مكان. لهذا الغرض، تسعى هذه الورقة البحثية إلى التركيز على الواجبات عبر الإنترنت وكفاءة الطلاب للغة الإنجليزية كلغة أجنبية. هدفنا هو اكتشاف آراء الطلاب حول الواجبات، وما إذا كانوا فعالين في التعلم. نرغب أيضًا في التحقق مما إذا كان الطلاب يفضلون الاجتماعات المتزامنة عبر الإنترنت أو أدوات التعلم غير المتزامنة مثل مهام الإلكترونية. في هذا الصدد، تتكون العينة من طلاب السنة الخامسة في اللغة الإنجليزية كلغة أجنبية في المدرسة العليا للأساتذة ببوزريعة. بشكل عام، تظهر النتائج الرئيسية لهذه الدراسة أن غالبية طلاب اللغة الإنجليزية كلغة أجنبية يعتبرون الواجبات الإلكترونية غير المتزامنة كأداة فعالة للتعلم الإلكتروني.

الكلمات الدالة: التعلم غير المتزامن-الفعالية- أدوات التعلم الإلكتروني- الواجبات عبر الإنترنت- التعليم المتزامن

## Introduction

While Covid-19 was scarily spreading in the world, universities were rushing to find new teaching modes in order to adapt to the confinement measures. Since then, e-learning has become the solution. However, this solution has been raising many issues and introducing novelties to the field. New teaching and learning tools were adopted in order to satisfy the demands of the new era and the needs of learners. In this way, teachers started using synchronous and asynchronous e-learning techniques in order to make learning accessible to their students. The latter, as can be observed by instructors, tend to have preferences about the ways they learn online. Hence, the main rationale for this study is to find out students' attitudes about synchronous and asynchronous e-learning tools, specifically about e-assignments. These attitudes are to be gathered through an online questionnaire.

## 1. Review of Literature

Although asynchronous and synchronous e-learning tools can be used in a complementary or converged mode, it is still important to investigate teachers' and students' preferences towards each separately. Synchronous e-learning tools like direct e-meetings resemble face-to-face instruction, except that they are automated, as they support natural communication and instant interaction (Brett et al., 2012; Chen et al., 2007). Meanwhile, asynchronous instruction and/or communication remain the most-relied-on form of computer-mediated education (Aragon & Johnson, 2003; Brett et al., 2012). Unlike synchronous

communication, this form does not depend on synchronized access and interaction (Johnson, 2006).

The Community of Inquiry Framework is one of the most-known for comprehending e-learning (Brett et al., 2012; Garrison, 1999; Kanuka & Rourke, 2009). This framework asserts that asynchronous learning tools and environments have numerous advantages like promoting intense and profound learning “in the presence of adequate cognitive, social, and teaching presence. Social presence refers to the feeling that others are “actually there” in the environment, whereas teaching presence reflects the instructional, facilitative, and organizational roles of the instructor” (Brett et al., 2012). Moreover, the asynchronous mode is the most dominant because of its flexibility and its modus operandi (Hrastinski, 2008; Perveen, 2016). This is because the asynchronous e-learning environments leave students with accessible learning materials anytime and anywhere, either on the agreed-on learning management system (LMS) or through other means (Perveen, 2016). These materials can be oral (audio), visual (video), handouts, PowerPoint slides, assignments, and/or links (ibid.).

Similarly, Lewis and Parsad (2008) think that asynchronous online learning is more prevalent than synchronous e-learning as the former allows students to respond anytime, whereas the latter compels them to be time-bound (Perveen, 2016). Perveen (2016) contemplates that: “The opportunity of delayed response allows them to use their higher order learning skills as they can keep thinking about a problem for an extended time period and may develop divergent thinking”. On another spectrum, it helps them to better construct their responses which produces self-paced, autonomous, and learner-centred instruction (Barbour et al., 2011). Therefore, the adoption of asynchronous e-learning tools may consolidate students’ prerequisites and facilitate the learning of new concepts (Hong et al., 2012; Perveen, 2016).

For all these reasons, this paper focuses on the use and efficiency of assignments as an asynchronous online learning tool. Its purpose is to examine the preferences and representations of EFL students regarding e-assignments and direct virtual meetings.

## **2. Methodology**

This small-scale study is a descriptive-exploratory one. It relies on a quantitative research approach.

### **2.1. Research questions**

The main questions of the research are:

- 1- Do EFL students find e-assignments efficient as an asynchronous e-learning tool?
- 2- Do they prefer direct virtual meetings or e-assignments and why?

## 2.2. Context and sample

The participants are senior EFL students at the Teacher Training School, Bouzareah, Algiers, also considered as pre-service teachers. Although the survey was diffused to the whole promotion of fifth-year students, about 150, only 20 of them filled in the research instrument because they were asked to fill it on voluntary basis. We guess that this is due to the timing of diffusion, which was during summer vacation (July-August 2021). Table 1 shows more details about the sample.

**Table 1. Participants**

Gender	Age range	University level
Female: 70%	19-26 years: 80%	Fifth year: 100%
Male: 30%	27-31: 20%	/

All the participants had courses which they took online for three semesters at university. Also, they tried different learning management systems like Google Classroom, social networks, Google drive, email, etc.

## 2.3. Research Instrument

An online survey was employed due to the requirements of the pandemic. The questionnaire was designed on Google Forms and shared with the participants via emails and social networks. The questionnaire aims to determine students' views of assignments as an asynchronous e-learning tool. It starts with a description of the survey purpose and the obtaining of consent. Three demographic questions follow, about gender, age range, and the university level. The main section of the e-questionnaire consists of 9 questions, eight are close-ended (yes/no, MCQs), while the last one is an open-ended question.

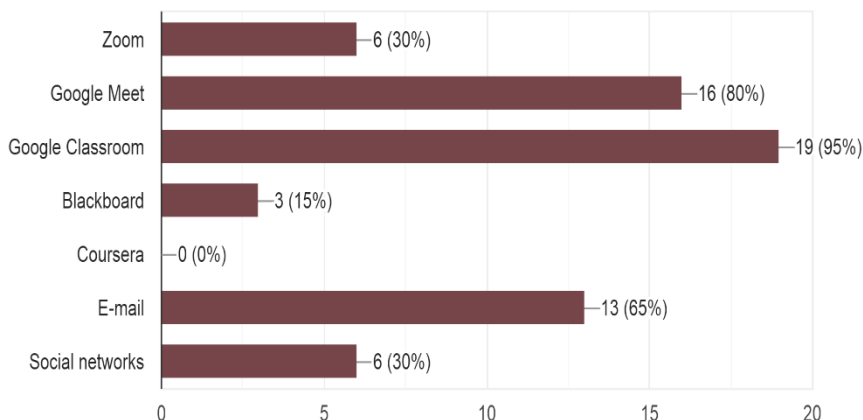
## 3. Presentation of Findings

The collected data are analysed using the descriptive analysis method which is well-known for suiting the analysis of quantitative data. The first question asked: "What are the e-learning tools that your teachers used?". It is a multiple-choice question where 7 options are provided (besides an open option: other). Most participants (95%) chose Google Classroom, 80% (n=16) went for Google Meet, 65% (n=13) for email, 30% (n=6) for Zoom and social networks, 15% (n=3) for Blackboard, and none chose Coursera. Figure 1 demonstrates these findings explicitly.

**Figure 1.** E-learning Tools Used by Teachers

What are the e-learning tools that your teachers used?

20 responses

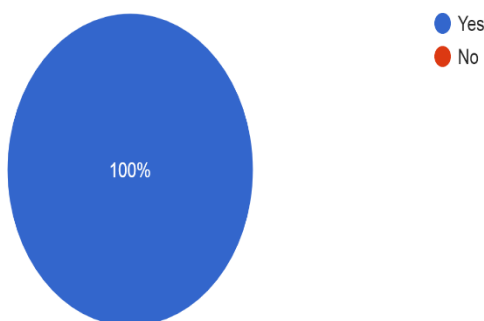


In the second question, the sample was asked whether they were required to submit online assignments by their teachers. All 20 participants replied with yes as can be seen in the following chart.

**Figure 2.** Teachers Asking Students to Submit Online Assignments

Were you asked to submit online assignments by your teachers?

20 responses



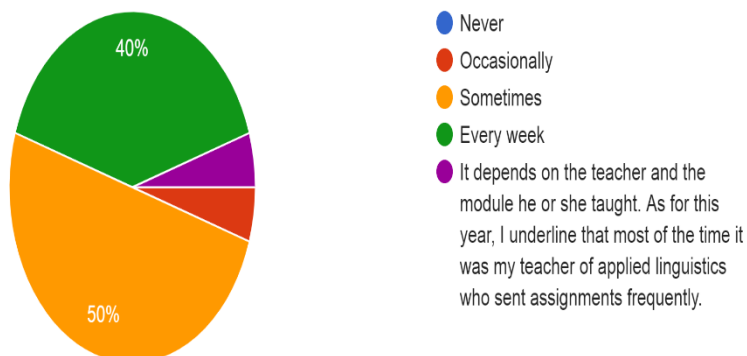
After that, we asked: “how often were you asked to submit online assignments?”. As can be read in Figure 3, 50% were sometimes asked to submit e-assignments, while 40% were asked to do it every week. 5% did it occasionally, and the remaining 5% said that it depends on the teacher and the

nature of the module. All in all, all the participants were asked to submit an e-assignment at one point of their e-learning experience.

**Figure 3.** The Submission Frequency of Online Assignments

How often were you asked to submit online assignments?

20 responses

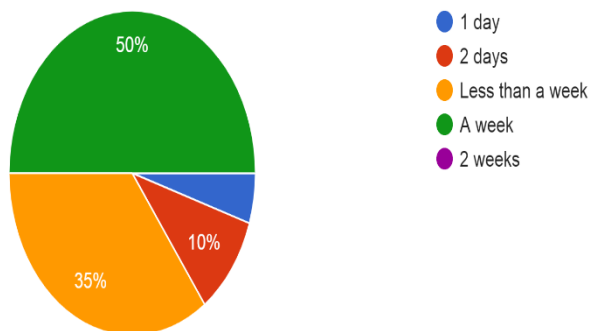


“How much time were you given to submit the online assignment after its posting?” is the next question. Half of the respondents were given a week to submit the assignments, 35% did it after less than a week, 10% in two days, and 5% in one day. Figure 4 displays these data in a pie chart.

**Figure 4.** The Time Given to Submit the e-Assignment

How much time were you given to submit the online assignment after its posting?

20 responses

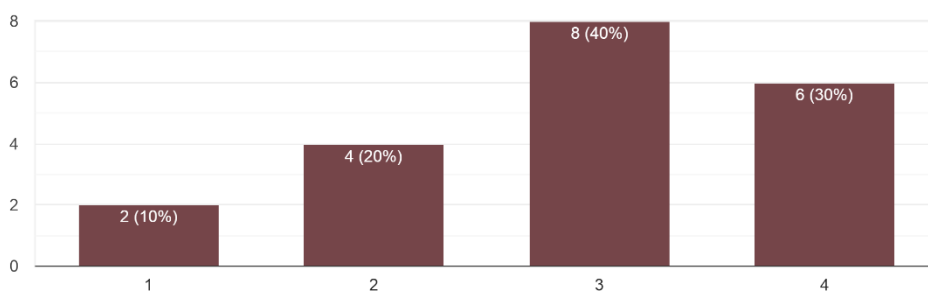


The fifth question was about whether the participants think that online assignments are efficient for learning. A linear scale was provided in the options; it goes from “not at all efficient” to “very efficient”, that is from number 1 to 4, respectively. Participants had to tick one number or option. Figure 5 shows that 40% find e-assignments to be efficient, 30% think they are very efficient, 20% find them to be a little efficient, and 2 participants (10%) see that they are not at all efficient.

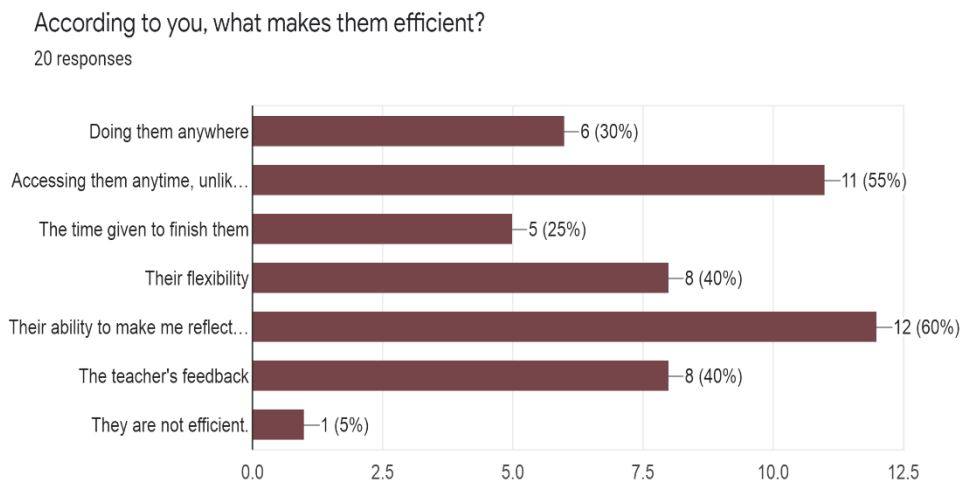
**Figure 5.** Students’ Perceptions about the Efficiency of Online Assignments

Do you think online assignments are efficient for learning?

20 responses



For the majority of students, 70%, who gauge e-assignments as efficient, the next question inquired about the reasons behind their efficiency. Six options were provided by the researchers, and participants could choose more than one. 60% (n=12) find the reason for the efficiency of e-assignments to be their ability to make students reflect about the content of the module, while 55% (n=11) believe it to be the ability to access them anytime unlike online meetings. These are not the only reasons as Figure 6 indicates, there is also their flexibility and the teachers’ feedback which were chosen by 8 participants (40%) each. At the same time, 30% (n=5) consider the reason to be the ability to do them anywhere. About 25% (n=5) deem the time given to finish them one of the reasons why e-assignments are efficient for learning. It should be mentioned that a last option was left open for students to insert extra reasons if any. Only one student inserted that s/he thinks e-assignments are not efficient which leads us to the next question.

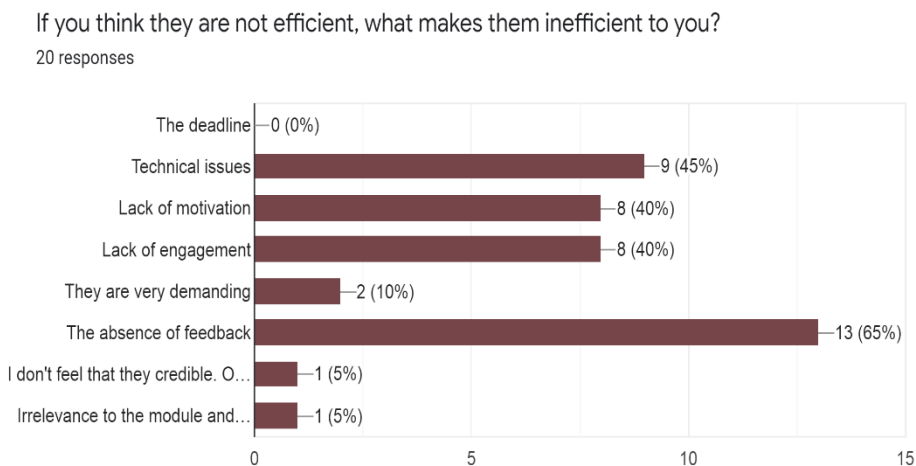
**Figure 6.** What Makes e-Assignments Efficient

On the other hand, respondents were also asked, in case they find e-assignment to be inefficient, about the reasons for their inefficiency through another MCQ. Interestingly, 65% (n=13) chose the absence of feedback to be the main cause. 45% (n=9) stated technical issues as the basis for their choice, the deadline of assignment submission, however, was not considered a problem at all. Lack of motivation and engagement were equally chosen by 40% (n=8) each. 10% (n=2) feel that e-assignments are very demanding, and thus, inefficient. In the open option, two students added the following reasons:

- I don't feel that they are credible. On the part of the students, they give it the least importance and do it in a rush. As for teachers, their feedback consists only of the mark they assign without even providing some remarks.
- Irrelevance to the module and students' needs in the future.

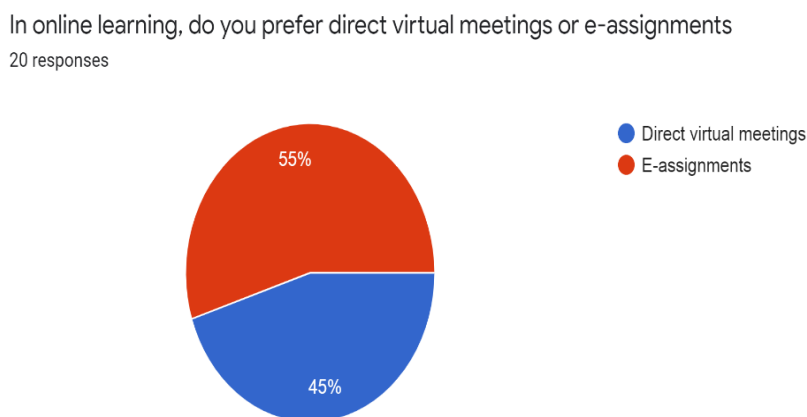


**Figure 7.** What Makes e-Assignments Inefficient



Surprisingly, when asked whether they prefer direct virtual meeting or e-assignments, most students, 55%, chose e-assignment as a preference. The remaining 45% prefer to have direct online lectures. The difference between the two is not huge, but it is often assumed that students prefer synchronous e-meetings over asynchronous e-assignments. It is noteworthy to see in Figure 8 that the sample goes against the tradition.

**Figure 8.** Students’ Preferences Concerning Direct Virtual Meetings and e-Assignments



In the last question, participants were asked to justify their preference in the previous question. Students’ replies were as follows in Table 2.

**Table 2.** Students' Justifications for Their Preferences

For e-assignments / Asynchronous	For direct virtual meeting / Synchronous
E-assignments are less boring.	I feel like when we are with the teacher, we know what to expect from the lesson, at least we know the main points. However, when doing an assignment, the amount of available resources can mislead us into things we are not necessarily concerned with
I believe that not all students can afford direct visual meeting, as they require good quality devices and good internet coverage, and e-learning gives time to students to think about their work, and do further research, hence they are more comfortable.	Direct-virtual meetings sound more real and more similar to in-person classes. I appreciate the fact that I can attend my teachers' classes, take notes on my own, receive questions, and above all engage in discussions. Shortly put, providing solely e-assignments demotivates me and pushes me to lose interest in the module under question.
I don't want to see the teacher.	We can ask questions.
It is better to work on assignments than handle technical issues.	Direct virtual meetings allow us to interact with the teachers, ask questions, debate and get direct feedback.
I prefer to study from home because there is less pressure.	I like to be engaged in the learning process and to be involved in discussions.
I cannot always attend the virtual meetings.	I went for direct virtual meeting since it is quite similar to studying in person. Indeed, teachers were available for responding to our inquiries unlike assignments where we cannot really assure that.
Virtual meetings are no always accessible.	To have more interaction and engagement with the teachers.
E-assignments are complementary to virtual meetings, but the latter are essential.	E-assignments are complementary to virtual meetings, but the latter are essential.

Absence of internet makes it not possible to attend virtual meetings.	I believe that e-assignments could be extremely helpful. However, I am afraid that relying only on them would not be enough. I chose direct virtual meetings because they help the learner know what to focus on, they give them the opportunity to ask their questions on the spot, and I think that they are more engaging.
I am mostly awkward during online meetings and I don't participate much that is why I prefer e-assignments.	/
Assignments help and motivate the learner to make efforts and be autonomous, instead of just depend on the teacher to present and lecture them about everything. But the more efficient way is the combination of both assignments and meetings.	/
I think that online meetings should be conducted along with follow-up assignments, that would receive feedback from the instructor.	/

These were the gathered data in this study. In the coming part, they will be discussed in relation to the research questions and purposes.

#### 4. Data Analysis and Discussion

Despite the fact that synchronous e-learning tools like live e-meetings are usually thought to be more favourable by students, our study revealed that 55% of the sample prefers asynchronous e-assignments while 45% are in favour of the e-meetings. Chen et al. (2005) tend to think that the improved quality of Internet and the progress of technological gadgets have helped make synchronous e-learning more prevalent and available. With Covid-19, this has become truer. Nevertheless, students seem to be more active in the asynchronous learning approach (Perveen, 2016). Perveen's findings imply that blending both synchronous and asynchronous tools remains the best option according to EFL students (2016). This is expressed in the following participant's words as she says:

I believe I would choose both with the sufficient amount of time dedicated to both. I would not rely solely on assignments to understand lessons, as I have already experienced that and it was not very effective for my learning experience. I found myself doing research and feeling lost about what knowledge I should use to do the

assignment, since the content shared through handouts was not sufficient to make me understand the content of the module, which would help me do the assignment. I did not mind the research part, as I felt like I was deepening my learning and broadening my understanding, but the complete absence of an online meeting, where there is live, face-to-face interaction with the instructor, was not beneficial to my overall learning experience. I enjoyed and benefited from teachers' lecturing and breaking down of different elements related to the course content.

Indeed, 70% of the participants think that e-assignments are efficient e-learning tools. According to them, this is mainly thanks to how they allow learners to deeply and cognitively reflect about the content of the module, to how they are accessible anytime and anywhere, their flexibility, and the teachers' feedback. To explicate, when learning asynchronously, students can contemplate their answers profoundly, analyse and construct them attentively, while synchronously, they can feel pressured to answer instantly (Andronicos et al., 2020; Perveen, 2016). Matter of fact, asynchronous tools are better for deep learning and even for deep lesson planning on the part of teachers (Perveen, 2016.). As to feedback, it is well-known that it contributes "positively to students' learning experiences and satisfaction" (Öztürk, 2021); hence, students see that when it is absent, e-assignments become inefficient which is why teachers are invited to provide feedback on e-assignments. To reiterate, e-assignments offer students the chance to learn in a self-paced, active, and autonomous manner. They offer flexibility in time and space, more independence in planning one's studying rhythm and process, but they do not allow for group work nor for peer exchange, and might lead students to feel separated and isolated (ibid.). This way, the sense of belonging to a class, i.e., community, might decline as there is no real-time interaction between the teacher and learners nor amongst students (Jiang, 2017).

In e-assignments, the learners receive the content in the form of an audio, video, document, or post/text through an a specific LMS such as Moodle or Google Classroom, at their own pace (Jiang, 2017). They are usually given a deadline for the assignment submission which they upload to the learning system. Most often, the teacher interacts with the learners through comments, emails, or on discussion forums. The learning responsibility is on learners, yet the instructor supports them academically (Majeski et al., 2016; Öztürk, 2021). When contemplating university students, many of them work, come from far, or have familial responsibilities, asynchronous e-learning opportunities, like e-assignments, cater for their needs and circumstances (Rose, 2016). These tools flexibly facilitate students' learning which is why asynchronous e-learning is often adopted by higher education institutions (Branch et al., 2018; Öztürk, 2021).

On the other hand, e-assignments like the rest of asynchronous learning tools can be disadvantageous. One of their major limitations are technical setbacks, the absence of direct face-to-face communication and the classroom environment, feelings of isolation and loneliness, lower motivation or interest, as well as lack of commitment and engagement (Hamilton et al., 2012; Jiang, 2017; Potts, 2011; Strang, 2011).

## 5. Conclusion and Recommendations

In this study, our purpose was to explore the efficiency of e-assignments as an asynchronous e-learning tool. We found that the majority of our EFL students sample think that they are beneficial, but it is better if they are blended with synchronous real-time e-meetings. It is undeniable that the Covid-19 pandemic has revealed the inequalities that exist in the e-learning system (Bates, 2020). This could be the reason why many students prefer to learn asynchronously, but it makes it necessary to recommend equal and low-cost access to Internet for all teachers and students (ibid.). It is also vital to train both instructors and learners digitally and to not limit them to few e-learning options. This openness and freedom will keep the industry of e-learning going (Burgos-Videla et al., 2020), the industry whose market is estimated to globally reach about 234 billion dollars by 2022 (Statista, 2020). On another front, teachers ought to give enough time for students to access and complete the assignments. For future studies, we can investigate teachers' perceptions and practices in relation to synchronous and asynchronous e-learning tools. The blending of both modes constitutes an interesting area to research. We can also try to reach larger numbers of participants, or rely on a qualitative research approach. To conclude, online education has been receiving tremendous attention from scholars and teachers since the outbreak of Covid-19. To guarantee its success, it is essential to stay open to new options and to listen to students' voice.

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